REPORT RESUMES

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READING, A REPORT OF THE ADVISORY BOARD TO THE MINISTER OF EDUCATION, PROVINCE OF MANITOBA.
MANITOBA PROVINCE, WINNIPEG, MINISTER OF EDUCATION

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DESCRIPTORS- *READING PROGRAMS, *SURVEYS, *ELEMENTARY GRADES, *READING RESEARCH, TEXTBOOK EVALUATION, READING MATERIALS, COMPARATIVE ANALYSIS, *TEACHING METHODS, TEACHING TECHNIQUES, CURRICULUM GUIDES, TEST RESULTS, TEACHER EDUCATION, QUESTIONNAIRES, BIBLIOGRAPHIES, LANGUAGE ARTS, MANITOBA, CANADA

READING PROGRAMS IN THE ELEMENTARY GRADES IN MANITOBA, CANADA, WERE STUDIED OVER A 4-YEAR PERIOD TO DETERMINE WHAT TYPES OF PROGRAMS WERE IN EFFECT AND TO MAKE RECOMMENDATIONS TO IMPROVE THE TEACHING OF READING. INCLUDED IN THE REPORT ARE (1) A SURVEY OF READING IN MANITOBA FROM 1946-1966, (2) A DESCRIPTION OF THE CONTENT AND DEVELOPMENT OF THE MANITOBA READING STUDY QUESTIONNAIRE, (3) THE DESIGN OF EXPERIMENTS EVALUATING THE "PHONETIC KEYS TO READING" (ECONOMY PUBLISHING COMPANY OF OKLAHOMA) AND THE PROVINCE-ADOPTED "CURRICULUM FOUNDATION SERIES" (FORTIES EDITION, PUBLISHED BY W. J. GAGE), AND (4) SOME COMMENTS AND RECOMMENDATIONS ON THE TEACHING OF READING, INCLUDING CURRICULUM, TEACHER TRAINING, TEACHING TECHNIQUES, MATERIALS, ORGANIZATION FOR TEACHING, SUPERVISION, AND TEACHERS AND PARENTS. TEN APPENDIXES ARE INCLUDED--(1) THE LEGISLATURE RESOLUTION SETTING UP THE SURVEY, (2) A LIST OF BRIEFS PRESENTED TO THE ADVISORY BOARD, (3) REPORT OF THE COMMITTEE ON PRIMARY READING, (4) REPORT AND RECOMMENDATIONS ON VARIOUS METHODS OF TEACHING IN MANITOBA, (5) ELEMENTARY CURRICULUM SEMINAR REPORTS, (6) RESULTS OF THE MANITOBA READING STUDY QUESTIONNAIRE SURVEY, (7 AND 8) REPORTS ON THE "PHONETIC KEYS TO READING" EXPERIMENTS CONDUCTED BY THE WINNIPEG AND FORT GARRY SCHOOL DIVISIONS, (9) A PRIMARY LANGUAGE ARTS OUTLINE, AND (10) A BIBLIOGRAPHY OF 80 SOURCES FOR RECENT READING RESEARCH. (LS)

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READING

A REPORT OF THE ADVISORY BOARD
TO
THE MINISTER OF EDUCATION

PROVINCE OF MANITOBA

January, 1967

RE 000 126

Edward G. Summers

READING

A REPORT OF THE ADVISORY BOARD TO

THE MINISTER OF EDUCATION

January, 1967

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The Advisory Board wishes to acknowledge the assistance of the many individuals and groups that contributed to this report and without whose efforts the Board could not have completed its work.

INTRODUCTION

In December, 1962, the Minister of Education, the Hon. Stewart E. McLean, referred to the then reconstituted Advisory Board a resolution of the Legislature of May 1, 1962, requesting the Board " ... to examine the programme for the teaching of reading in elementary grades with a view to its improvement."

The report that follows represents four years of deliberations throughout which the Board has systematically and objectively sought to fulfill the responsibility with which it was charged.

Although it may be considered that a four year span constitutes an unusually lengthy period of deliberation, it should be recognized that the broad nature of the terms of reference as contained in the May 1 resolution necessitated a wide ranging and thorough examination of many facets of a most complex subject, an examination that included evaluation of a three year controlled experiment, a province wide survey, and the consideration of numerous letters and briefs presented by various groups and individuals.

The main body of the report has been kept as concise as possible in order that those who read it may have easy reference to its principal considerations and recommendations. It should be emphasized, however, that the appendices constitute an equally significant section of the report, since it is on the basis of the information and findings included in these documents that the Board's final recommendations have been made.

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READING IN MANITOBA 1946-1966: A SURVEY

The general history of reading instruction records the many changes in the aims of reading as they reflect the needs of pupils at different periods, and the many different approaches that have been devised by educators in their attempts to find better methods of instruction. Undoubtedly these general aims and approaches to instruction have had influence upon the methods and materials used by teachers in Manitoba. The following review of events, reports, and decisions pertinent to a study of reading methods is a summary of the actions of the Advisory Board to the Minister of Education, Province of Manitoba, during 1946-1966. It does not include a review of the developments in reading instruction outside the province, which were studied by the consultants to the Advisory Board, nor does it contain an account of the way in which emphasis upon one approach to teaching or another in beginning instruction has swung back and forth over a period of many years. The report should therefore be placed in context by those who wish to have as complete a picture as possible.

Section I: 1946 - 59

In an effort to develop a more unified curriculum for Western Canadian schools, a Joint Committee of representatives of the four western provinces met in 1944 for the purpose of considering the adoption of a common set of readers for the elementary grades . (The needs of Manitoba schools had been indicated in replies to a questionnaire distributed in 1943.) This committee selected the Curriculum Foundation Series by Gray and Arbuthnot, two recognized American authorities in reading. The series was revised for Canadian schools and introduced into Grade One classes in Manitoba in September, 1946. This introduction was followed in 1947 and 1948 by new readers in Grades Two and Three. The readers were well received by teachers at each grade level, and definite improvement in elementary reading was noted by many persons involved.

Because the policy of supplying free texts had not been introduced, the new series received a subvention from the Department of Education which continued to give this financial assistance until 1959 when free texts were authorized. Teacher manuals and pupil workbooks were available for purchase.

To familiarize the teachers with the principles involved in this reading series, the W. J. Gage Company conducted a series of reading institutes during 1947 throughout the provinces which adopted the series. This service was repeated in Manitoba in 1957.

During the period from the introduction of the series until 1957, the Advisory Board was concerned with the serious problems of teacher shortage and the lack of adequate school libraries because both of these factors would affect the standards of education and, obviously, reading instruction. While general satisfaction with the reading series continued to be expressed by teachers, sources outside the teaching profession requested more emphasis on phonics. This pressure was studied by the Curriculum Committee on Elementary English and a sub-committee was appointed on April 17, 1958 to investigate and report on various aspects of reading instruction in the province. The report of the committee was adopted by the Elementary English Committee on June 12, 1959 and read in part as follows:

"The present programme of reading for the primary grades presents a full and balanced course in the reading skills. It is based upon research in this area and represents the thinking of the majority of the experts in the field .....

With specific reference to the teaching of phonetics, an examination of the guide-books will dispel any question as to provision for its teaching. Timing of presentation, however, is so arranged that new elements are introduced in small doses continuously through the primary grades, rather than concentrated at one grade level, followed by a full scale re-teaching in the succeeding grades. The average grade one pupil is not expected to be an independent fluent reader in the broad sense. However, in grade four the average child will not only be fluent and independent in reading, but he will possess sure knowledge of the use of several reading techniques of which the use of phonetics will be one .....

Critics of the programme believe firmly that because the phonics are not articulated, they are not taught. By Grade III much work in syllabication has been done, and it is the syllable which is considered to be the unit of pronunciation .....

However, no one has yet prescribed the one way to teach all children. When an approach to any subject matter fails with some children and yet works with the majority, teachers should be expected to alter their techniques, so that those with whom the first has failed may be taught the skills in some other way." [1]

Section II: 1959 - 62

In 1957, a Royal Commission was established to examine all facets of education in Manitoba. Briefs and resolutions were received, included among them one from Ernest G. and Mary Johnson that contended:

> "(children) should be taught the alphabet, in proper order, and with no omissions, in easy stages from the beginning of Grade I. They should be drilled on the sounds for the letters, in isolation. They should be thoroughly tested at every step before the training proceeds". [2]

At this time, the Manitoba School Trustees Association at its annual convention supported the contention with the following resolution:

> "Whereas parents are dissatisfied with the present method of teaching beginners without the aid of phonics, Therefore, be it resolved that phonics be taught".

Because the Royal Commission felt that reading occupied a special role in elementary education, it devoted a separate period of time to examination of the subject. The final report of the Royal Commission was published in July 1959 and contained certain recommendations with reference to reading. [3]

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[1] Appendix C. Report of the Committee on Primary Reading, 1959.

[2] Brief submitted to MacFarlane Commission, November 6, 1957 by Ernest G. Johnson LL.B. and Mary Johnson.

[3] Appendix D.

These referred to greater emphasis on the teaching of phonics, the training of teachers to use the phonics approach to reading, and the employment of supervisors of reading wherever a district had sufficient primary teachers to warrant such appointments.

Experimentation with various different reading series was carried on during this period and in September, 1962 the Winnipeg School Division No. 1 and the Fort Garry School Division No. 5 commenced three year controlled experiments to test the effectiveness of the Phonetic Keys to Reading materials against those of the Curriculum Foundation Forties Series.

Section III: 1962 - 66

At the first meeting of the Advisory Board as reconstituted in 1962, a letter from the Hon. Stewart McLean, then Minister of Education, was received directing the Board's attention to a resolution of the Legislature, dated Tuesday, May 1st, 1962, resolving "that the Advisory Board ... be requested to examine the programme for the teaching of reading in elementary grades with a view to its improvement."[4] "The Board studied a report on the teaching of reading in the elementary grades containing 'a summary of complaints made against the current series, the pertinent recommendations made to and by the Royal Commission, and a summary of current trends in the philosophy of reading' prepared at the Board's request by the Curriculum Branch. Staff members from the Manitoba Teachers College and from the Faculty of Education responsible for the teaching of courses in Methods of Teaching Reading were interviewed, and supervisory personnel from the Metropolitan Winnipeg area were invited to attend and discuss with the Board the current programme in Manitoba as well as experiments now in progress with other reading series and methods. The Board also invited an interested parent, Mrs. Mary Johnson, to appear and present her views. The Board has since received additional materials from Mrs. Johnson, and copies of the initial evaluation of a reading experiment being conducted in the Winnipeg School Division.

As a result of its study and investigations, the Board passed the following motion which was forwarded to the Minister of Education:

> While the committee is fully aware that no one method of teaching reading, taken singly, is likely to be wholly satisfactory, in view of the experimentation currently being conducted in the Winnipeg and Fort Garry School Division, the Curriculum Committee prefers to reserve final decision on this matter until the results of these experiments have been made available to the Board - In the meanwhile it is recommended that:
>
> (a) instructors in primary methods in the various teacher training institutions be requested to include instruction in supplementary phonic methods in their courses; and

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[4] Appendix A.

(b) a questionnaire be prepared and circulated to a number of elementary teachers asking for their comments on reading generally, including the present series of texts and any other methods or series in which they are interested and knowledgeable." [5]

During 1963-64 the Advisory Board received progress reports of the reading experiments and appointed a committee to construct a questionnaire on reading which was distributed in May, 1964.

A further important step in improving reading instruction was taken when the Elementary Seminar met in July, 1964 to outline the principles upon which a total revision of the elementary program would be based. Those who took part in the Seminar were teachers appointed because of their range of experience and background knowledge of elementary education.

Most significant in the planning of reading programs were the statements included under "English", since these have formed the framework upon which the revised reading programs for Grades I - IX are based. [6]

A new curriculum committee was formed to revise the English program (Grades 1 - 9) following the pattern of language arts. In such a pattern reading is recognized as one of four major communication skills, each of which reinforces the other three. The committee was subdivided into three levels - primary, intermediate and junior - and each sub-group was asked to construct a program for Manitoba schools and to make selections of new texts and/or materials suitable for use in teaching such a program.

During that year, as many of the primary reading series then available were examined, and six were selected for evaluation. All of the series could be used to develop a language arts program. Two of the series stressed early emphasis on word attack skills with particular attention to phonics analysis, two stressed a language development approach, one was the most recent revision of the presently authorized series, and one was a totally new program which seemed to embody most of the factors considered important in developing reading skills.

The six series reflected the following trends which have developed since the time of the last authorization:

1. that a basal reading series may be used as the core of a reading program but that other supplementary activities are necessary for developing the reading skills of each individual pupil according to his needs.
2. that ability to use word attack skills affects the level of reading independence in the early grades. Patterns of development of these skills vary from series to series, particularly in phonics analysis, but almost all modern series include much stronger word attack programs earlier.
3. that learning to read is not completed at the end of the primary level but is an on-going process.

The committee working at the junior level selected one basal text designed to be used in a formal way, i. e. both teacher and pupil are aware of the skill being studied as contrasted with the primary situation where the teacher only may be aware of the planned goal of the lesson.

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[5] Annual Report of the Department of Education, Province of Manitoba for the year ending June 30, 1963; pp. 98-9.

[6] Appendix E.

The Advisory Board agreed to have the six primary series tested by fifty-two pilot classes and the junior high text by twelve classes. These classes represented as far as possible the range of differences found in the province.

During 1965 and 1966 the Advisory Board devoted considerable time to discussion of the final report of the Winnipeg experiment, the findings of the Reading Study Questionnaire, and the proposed Elementary Language Arts program for Grades One through Nine.

The Winnipeg experiment concluded in June, 1965 and the final report was distributed to Advisory Board members in September, 1965. The conclusions of the experiment are included in the Appendices of this report. Dr. Andrew Moore's minority report was also made available to the Board in January, 1966.

The Advisory Board received and endorsed the recommendations of the final report on the Reading Study Questionnaire in April, 1966. This report is also included among the Appendices; the implications for all phases of reading instruction are outlined in detail there.

In order to make more up-to-date materials available to teachers, the Advisory Board recommended the authorization of one new primary reading series in April, 1966 for introduction at the Grade One level. The selection of the series was made on the basis of the criteria established by the Primary Language Arts committee. The Advisory Board also recommended that the Minister accept in principle the authorization of a second primary reading series in 1967, in order that the instructional program may be increasingly flexible as teachers become familiar with a wider range of approaches to reading.

The Advisory Board also recommended the continuous evaluation of the program following its introduction to the end that the children may be taught by the most suitable methods available.

THE MANITOBA READING STUDY QUESTIONNAIRE

The Manitoba Reading Study Questionnaire originated through a desire of the Board to become better acquainted with the views of Manitoba teachers on the subject of reading teaching methods. In consequence, as a result of a motion passed in May, 1963, a committee of skilled and well qualified personnel was established to design a questionnaire and to evaluate the responses to it.

Initially, it was only the Board's intention to seek information on reading instruction generally and the effectiveness of the CURRICULUM FOUNDATION SERIES in particular. It soon became evident, however, that a more broadly based questionnaire would be needed if all facets of reading were to receive the necessary consideration. Accordingly, the Board authorized the committee to proceed with a more complete survey that would encompass the following areas:

1. Components of the Reading Program.
2. Individual differences, special services, and library facilities.
3. Evaluating, recording, and reporting.
4. Professional growth of teachers of Reading.
5. Role of the administrator.

In addition, its distribution was extended to include school inspectors, superintendents, teacher training personnel, supervisors, teachers in training, principals, and elementary and secondary school teachers, with approximately 80% going to elementary school teachers. All categories of teaching situations were surveyed. Of one thousand questionnaires sent out, seven hundred and eighty were returned and it is on the basis of these that the final report was compiled. The questionnaire was distributed in June, 1964 and the committee's findings discussed in preliminary and final form in January, 1965 and April, 1966 respectively.

There is no intention in this section of the report to summarize the detailed comments and recommendations emerging from the analysis of returns. The final report of the committee has been included in the Appendices and its contents are commended to all those interested in reading development in Manitoba. [1] It is the Board's intention, however, to comment on the general state of reading as it was revealed in the information provided.

In the Board's opinion, the results represent with a fair degree of accuracy the overall state of reading as it existed in this province in 1964. There is also, moreover, a close correlation between the Manitoba results and those of two other surveys of a similar kind recently undertaken, one in Canada and the other in the United States. [2] At the same time, the Board believes that a similar survey conducted in 1966 would not reveal any marked dissimilarities from the 1964 returns. This statement is made with full cognizance of the very extensive and commendable in-service training program that was launched in September, 1966 coincidental with the introduction of a new Grade I Language Arts program. The Board contends, however, that effective and permanent benefits to reading instruction can only be brought about through a long-term and sustained program of teacher training, both of the in-service variety and at the Faculty of Education, and the development of those facilities that will permit the best possible administration of the elementary school that circumstances will allow. In this regard, as it has indicated in previous submissions recorded in its proceedings, the Board wishes to lend its support to the establishment of larger school units and single-district divisions as a major step necessary toward the realization of this latter goal.

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[1] Appendix F

[2] Mary C. Austin and Coleman Morrison THE FIRST R. New York. The MacMillan Company, 1963 (Harvard Study)
A FIRST LOOK.Report on the Survey of Current Practice in the Teaching of Reading in Ontario, June 1965 (Ontario Curriculum Institute)

In view of the current concern over the teaching of phonics in our schools, it was interesting to note (Chapter II, Part A - Word Recognition) that of those who responded:

> " ..... 50 per cent of Manitoba teachers preferred to teach the consonant and vowel sounds along with the development of a sight vocabulary. 41.7 per cent preferred to teach the sounds after the mastery of a basic sight vocabulary. 95 per cent of teachers reporting felt that phonic analysis was of major importance when used in conjunction with other techniques of word recognition. Over 75 per cent stated that they teach phonic analysis both formally and as suggested by the teacher's manual."

On the basis of these returns, and whatever the method used - be it "sensed" or "articulated", there would appear to be no neglect of phonic instruction in Manitoba classrooms. Indeed, the Board could not help but wonder whether other techniques of teaching word recognition were not being neglected in consequence.

Although, as previously stated, it is not intended to repeat here those details already carefully worked out in the document appended, the Board believes that there would be some value in drawing particular attention to the following extracts that relate very specifically to the state of reading in Manitoba.

> "In theory, differences among children are generally recognized by respondents to the questionnaire, but in actual practice chronological age is the main or sole criterion of readiness for formal reading used by at least 50 per cent."

> " At all levels teachers stressed 'following directions' rather than those skills which are a part of critical thinking.

> "Research indicates that reasoning ability begins in children at about three years of age and by the time the child is in grade one he is able to find solutions to simple lifelike problems and from there on is able to develop his higher level critical thinking and reading skills."

"Examination of a sampling of the questionnaires revealed that many teachers seem to be unaware of the real purpose of basal texts and most often rely on the basal series as the sole tool of instruction. Although the manuals contain specific instructions for the use of a wide variety of other materials, few make regular use of supplementary materials other than skills workbooks, particularly phonic workbooks."

"The questions focusing on provisions in the reading program for individual differences found in children seem to show that although there is some recognition of individual differences and some attempt to adapt instruction to meet these differences, most teachers cling to the concept that they are teachers of a particular grade and are, therefore, compelled to teach the skills and to use the materials considered suitable for that grade irrespective of differences that may exist among the children they teach."

"It would appear that instructional procedures which make greater demands on teacher knowledge of reading and organizational abilities are feared by teachers, whereas programs which would be highly structured and would organize instruction into discrete sequential steps and would, therefore, make fewer demands on the teacher's ability, tend to be looked on more favorably."

"There seem to be few planned programs to challenge the gifted student in Manitoba schools outside the planned programs of Metropolitan Winnipeg."

"Although test results appear not to be used to adapt reading instruction to pupil ability, teachers regard achievement in reading as a major criterion for promotion. Contrary to modern educational thought, the main way used to help poor readers is to have them repeat the grade."

"Very little interpretation of the reading program, its goals, methods and materials of instruction is given to parents."

"An examination of course content to discover which skills were discussed shows that over 90% (of teachers in training) report they rèceived training in word recognition skills and the skills to be developed at the primary level. 20% report training in intermediate reading skills while even fewer received training in diagnostic or remedial techniques."

"According to the replies, the principal has no major responsibility in developing goals for the program, little importance in its implementation or appraisal, selection of materials, or in provision of diagnostic instruction."

"Very few teachers have available to them in their schools the professional journals concerned with reading and language development at any level .....

Among those who do have them available, a very small number read them regularly. "

The Board also noted that the report on several occasions made mention of the need to follow up various responses with a field study in order to clarify certain findings. It has been advised that the Manitoba Teachers' Society is planning a reading study that would include procedures of this kind. The results of this study are therefore eagerly anticipated.

The Board wishes to go on record as fully endorsing the findings and subsequent recommendations of the Reading Study conducted in 1964 and, while not intending to detract in any way from the excellent instruction being provided in many classrooms across the province, believes that the implementation of the Committee's recommendations, if only in part, will make a significant contribution to reading development in Manitoba.

PHONETIC KEYS TO READING EXPERIMENT

In 1962, the Winnipeg School Division authorized an experiment to compare the results of the teaching of reading in three schools by two different methods, the phonetic analysis and the conventional. In the former, emphasis is on the sounding out of letters in the beginning program, while in the latter initially sight words are taught and followed by word analysis using phonics, structure, general configuration, and context clues. The two series used in Grades I - III were PHONETIC KEYS TO READING, published by the Economy Publishing Company of Oklahoma, and the CURRICULUM FOUNDATION SERIES (Forties Edition), published by W. J. Gage, the then authorized provincial reading series. The experiment was carefully constructed and statistically validated throughout. It was of three years duration and concluded in the summer of 1965.

The Advisory Board maintained a close contact with the experiment from the outset and considered carefully the published reports of each of the three years during which it was conducted. In addition, it invited to its sessions those members of the Winnipeg school system most directly concerned with the program's execution and had the opportunity on several occasions of questioning them directly as to progress and results. At the same time, the Board received and examined reports prepared by other persons interested in the experiment, notably Dr. Andrew Moore, former Winnipeg school trustee, and Ann Hughes, Reading Reform Foundation, New York.

As in the case of the Manitoba Reading Study Questionnaire Report, the Board does not propose to summarize or repeat the details concerning the statistical information and conclusions presented in the reports prepared by the Winnipeg School Division. The research reports prepared as a result of the Winnipeg experiment have been included in the Appendices for those who wish to study the details for themselves. [1]

However, the general conclusions emerging from the three year study would appear to be as follows:

1. Pupils taught the PHONETIC KEYS TO READING program commencing in Grade I performed significantly better in Grade I than those taught by the conventional method.
2. The trend established in Grade I did not prove to be consistent. By the end of Grade II, it is less clearly defined, and by the end of Grades III and IV ceases to be significant.

To quote from the Winnipeg Report of June 18, 1965:

> " ..... This suggests that in the end the two methods will produce approximately the same results when measured within the limits of the testing devices used in this study.
>
> Since, in the primary grades, "word attack" skills form a major part of the reading program, and since phonics is common to both the Phonetic Keys to Reading and the conventional program, although

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[1] Appendix G

taught differently and at different times, it seems reasonable to expect that the results would show little variation . . . . ."

At the same time, the Board also noted that, to quote again from the Winnipeg Report's conclusions, "On the basis of this experiment, there is no conclusive evidence to indicate that the Phonetic Keys to Reading program is superior to the conventional method in teaching spelling skills."

The Winnipeg findings did not go unchallenged. On the basis of the first and second year reports of the Winnipeg experiment, Ann Hughes of the Reading Reform Foundation, New York contended that,"of the four groups which began their reading instruction with Phonetic Keys, three showed highly significant superiority in all tests." Dr. Andrew Moore, chairman of the Winnipeg School Division's Committee on Articulated Phonics, subsequent to the publication of the June 18 Research Report, submitted a personal minority report contending that the analysis was incomplete and inaccurate in some of its aspects, and placed certain interpretations of his own on the statistics provided.

In addition to the controlled experiment, twenty-four other Winnipeg schools were involved in a less formal project, with no controls over pupil and teacher variability. In Grade I, a significant difference is observable in favour of the Phonetic Keys to Reading program; in Grade II, the difference was maintained in some classes, but not in others; in Grade III, no noticeable trend favouring either method was evident. As far as these classes are concerned, it is difficult to determine how much reliance can be placed on the results.

The Board also noted that a number of teachers involved in the experiments, when asked to comment, expressed satisfaction concerning their experiences in using the Phonetic Keys to Reading texts. As this type of reaction has been found to be common among teachers generally when introduced to new materials, the Board would have preferred to see a more analytic approach taken if teacher evaluation was to be taken into account. It is interesting to note that few of these teachers elected to continue in the use of the experimental series after June, 1965.

A second experiment in the Greater Winnipeg area using Phonetic Keys to Reading was carried out by the Fort Garry School Division. This project, involving seven experimental classes in each of Grades I - III over the three year period 1962 - 65, was somewhat different from that of Winnipeg in that the matching of classes was of a more general nature and that other phonic materials were introduced. A progress report prepared by the Fort Garry staff in October, 1965 would seem to bear out the conclusions emerging from the Winnipeg experiment, considerable gains by the experimental group in the initial year of instruction, with the trend becoming less discernible in the second year, and with no significant differences apparent in the third year. [2]

The Board is naturally aware that statistics of any kind are always open to various interpretations and, at the best, they can only be valid within the limits of the conditions under which the experiment was carried out. By the same token, only those responsible for the execution of an experiment can be fully aware of these conditions and therefore in a position to draw valid conclusions. In short, the Board sees no reason to doubt the conclusions of the Winnipeg Report 8/65 as presented to the Winnipeg School Board in June, 1965 and as accepted by that Board. These conclusions, moreover, are basically supported by the findings of the Fort Garry experiment.

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[2] Appendix H

CONCLUSION

The results of the two Winnipeg experiments would seem to point to one significant conclusion. It is a conclusion that has often been repeated in the literature that the Board has considered and that was early drawn to its attention in 1963 in LEARNING TO READ - A Report of a Conference of Reading Experts, namely that no one book nor its brand of teaching has the answer to all questions.

As Dr. Andrew Moore, in his Minority Report to the Winnipeg School Board, puts it:

> "Actually, there should not be any controversy over 'sight' versus 'sound' methods of teaching reading. The best of both should be used."

The Board, however, would go further than this in stating that Reading is probably the most difficult and most complex art, involving many skills, that a child may ever be required to master. When considered in this light, the so-called controversy between "sight" and "sound" ceases to have any real meaning.

THE TEACHING OF READING

The resolution of Mr. D. Campbell as amended by Mrs. Morrison, to which the Legislative Assembly of Manitoba gave assent on May 1, 1962, requested the Advisory Board "to examine the program for the teaching of reading in the elementary grades with a view to its improvement." [1]

At the time this resolution was passed, without doubt the most vociferous advocates of change in reading methodology were those who favoured the introduction of articulated phonics as the major approach in beginning reading instruction. These same advocates also urged the use of the co-basal phonics series PHONETIC KEYS TO READING as the prime support for this program.

Representations of this nature had previously been made to the Royal Commission which had come to the conclusion that "an adaptation of the sight and phonic method holds greatest promise for the effective teaching of reading." It is worthy of note that the Commission recommended the teaching of the sounds of letters after an initial stock of sight words had been introduced and believed that this could be effected without abandoning the CURRICULUM FOUNDATION SERIES, provided that the use of "phonic attack" was taught to teachers in training. [2]

Early in its deliberations, the Board met with personnel from Teachers College and Faculty of Education to discuss with them the reading methods instruction received by teachers in training. As a result of these discussions, the Board concluded that it was not adequate to centre teacher instruction around a single basal reading series, as appeared to be largely the case at Teacher's College, but that prospective reading instructors should have access to as many techniques as possible within the limits of the time available. Accordingly, the Board did not feel that it needed to await information forthcoming from the Winnipeg experiments with phonics already underway and, as an interim measure, recommended that instructors in primary methods in the various teacher training institutions be requested to include instruction in supplementary phonics methods in their courses. This proposal was subsequently acted upon.

From all its sources of information, the Board could find no-one who disputed the importance of phonics in reading instruction. There existed, however, a sharp division of opinion between those who favoured articulated phonics (the sounding of letter sounds in isolation) and those who advocated sensed phonics (the teaching of sounds associated with words). Main concerns here appeared to centre around how much, when, and in what manner.

It seemed unfortunate to the Board that this division of opinion led to an attitude of entrenchment in some cases and, in others, a tendency to advocate a single method as a solution to all reading ills. Equally unfortunate was the publicity given to the matter by the various news media and the sweeping generalizations that emerged in consequence, most of these based on exceedingly tenuous scraps of knowledge. Too often, as a result, the real issues were obscured.

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[1] Appendix A

[2] Appendix D

If the Board hoped to find in the results of the Winnipeg experiments using PHONETIC KEYS TO READING a ready made solution to the problem, it was to be disappointed. As has already been indicated in this report, no permanent significant differences emerged when the phonics method was compared to the traditional method as used in the 1946 - 47 edition of the CURRICULUM FOUNDATION SERIES. Moreover, published reports from other centres where similar experimentation has been carried out are so contradictory that no clear cut pattern can be distinguished. [3]

Accordingly, the Board concluded that it must look elsewhere for a solution to the problem that had been placed before it by the Legislature.

According to the authorities, four major areas of growth are evident in reading. These are: Word Recognition; Comprehension; Study Skills; Rate and Fluency. Moreover, these are areas of continuous growth throughout school years and beyond. Phonics, of whatever variety, is part of the broad area of word recognition, as are also many other skills.

As has already been indicated in this report, a multiplicity of skills are associated with the art of reading and children acquire these skills in a variety of ways, to the point where it is unreasonable to think in terms of a panacea to meet individual needs.

In consequence, the Board came to the conclusion that it was logical to think first of the child, rather than the method. On this basis, it could be further concluded that the "phonics issue" as such was outmoded in terms of children living in the latter half of the twentieth century and was merely part of a much broader problem for which solutions had to be found.

In tacking this problem, the Board found much sound thinking in two documents - the report of the Manitoba Reading Study Questionnaire [4] and the Elementary Curriculum Seminar Report. [5] The comments and recommendations that follow draw heavily on these two reports. They are listed under seven headings:

1. The Curriculum
2. Teacher Training
3. Teaching Techniques
4. Teaching Materials
5. Organization for Teaching
6. Supervision
7. Teachers and Parents

1. THE CURRICULUM

Both the Elementary Curriculum Seminar (1964) and the Primary Language Arts outline (1966) emphasize the development of communication skills through a combination of oral and written English and Reading, involving in the latter the recognition of the printed word and the interpretation of the meaning intended. In this regard, the Board recommends a thorough examination of these documents, both of which have been included in the Appendices.

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[3] Appendix J

[4] Appendix F

[5] Appendix E

In effecting necessary change, important progress has already been made with the authorization in 1966 of a new reading series for the first year (the CANADIAN READING DEVELOPMENT SERIES), the completion of the revised Primary Language Arts outline, and the initiation of change at the junior high level. The new programs already approved, the Board believes, will make a significant contribution to the effective implementation of the principles enunciated by the Elementary Curriculum Seminar.

The CANADIAN READING DEVELOPMENT SERIES, the Board believes, will provide a well balanced program with sufficient emphasis on word recognition skills to enable children to become independent readers as quickly as possible. Moreover, the series does take a step in the right direction by including two levels in the skills program designed to provide children with patterns more appropriate to the pace of their development.

The continuation of a planned developmental program into the intermediate and junior high grades, already underway, is of particular importance in filling a gap which has previously existed.

However, the Board regards the changes now in progress as only the first stage in the development of an adequate reading program. It is essential that provision be made for the introduction of a greater flexibility that will enable teachers to adapt the program to their pupils whether they be gifted, average, or below average. This will involve the authorization of more than one reading series and will necessitate a pattern of development, particularly in the intermediate and junior high grades, that will cater to an ever widening range of achievement. For some time, the basal reading series will continue to be the prime method of instruction, although the Board foresees a period in the future when its significance may be minimized in favour of a much wider and more flexible range of materials.

RECOMMENDATION

That the Manitoba Reading Program remain under continuous evaluation and review in all its aspects to ensure a pattern of development that is sequential, continuous, flexible, and up-to-date.

2. TEACHER TRAINING

It is regrettable that at times the objectives of the curriculum planners and their implementation in the classroom do not always coincide. Flexibility will have little meaning if teachers, as they have tended to do in the past, continue to rely so heavily on the approach to reading instruction as developed in the teacher's manual. The principle of individual differences will receive only lip service if teachers do not have a clear awareness of the developmental nature of reading and an understanding of those techniques that will enable them to detect at an early stage reading difficulties in their pupils and adapt their instruction accordingly. For these reasons, the Board places a great deal of emphasis on the teacher training programs at the Faculties of Education and the development of an adequate and continuous in-service program for teachers in the classroom. In this regard, the Board finds considerable merit in the recommendation of the Reading Study that would require prospective teachers to take basic courses in reading that would include a survey course in developmental reading, a course in diagnostic and remedial techniques, and a course in children's literature. It is hoped that such a program may become feasible with the eventual extension of the period of teacher training.

RECOMMENDATION

That in-service training in reading be provided for teachers on a continuous basis and that courses in developmental reading, diagnostic and remedial techniques, and children's literature be incorporated into the program for teachers in training at the Faculties of Education.

3. TEACHING TECHNIQUES

Throughout its deliberations, the Board was deeply concerned over the apparent emphasis on a statement appearing in the teacher's manual accompanying the CURRICULUM FOUNDATION SERIES, and reproduced in the official Program of Studies, namely that sounds were not to be taught in insolation. Whatever the merits of the situation, the Board could find no justification in the narrow prescriptive manner in which this injunction appearing in the teacher's manual was regarded. In the Board's opinion, no single method of instruction in beginning reading should be advocated, but rather a variety of approaches should be permitted geared to the particular needs of the child. For some children, a heavier emphasis on phonics might be helpful; however, such a procedure would be pointless with children having problems in auditory discrimination. Moreover, as is recommended in the Reading Study, teachers should be encouraged to be creative in the adaptation of materials and procedures for classroom use and use the information contained in manuals as suggestive, not prescriptive.

RECOMMENDATION

That no single method of reading instruction be advocated and that teachers be encouraged to utilize a wide variety of appropriate techniques of teaching to meet the varying individual needs of children.

4. TEACHING MATERIALS

If the principle of individual differences is to become a reality, it is essential that materials of different reading levels, including basal reading series, be made available. These may include storybooks, reference books, newspapers, magazines, and a variety of audio-visual aids. At the same time, this should be accompanied by steps to establish an adequate central library in every elementary school with the accompanying services.

RECOMMENDATION

That elementary schools be encouraged to build up a stock of supplementary reading materials, in conjunction with the development of a central school library, and that the grant structure be so modified as to bring this about.

5. ORGANIZATION FOR TEACHING

The Board is convinced that the present grade structure in the elementary school, with its emphasis on examinations and failure, is far from being the best type of organization to permit each child to progress according to his natural ability. There are a number of alternatives that have found favour in recent years and some of these are referred to briefly in the Reading Study report. The Board, therefore, commends them for serious consideration.

RECOMMENDATION

That a study be made of the present grade system in the elementary school with a view to its replacement by an alternative form of vertical organization more suited to the natural rate of pupil progress.

6. SUPERVISION

The Royal Commission Report made mention of the fact that where teachers had access to qualified specialist assistance, there was a noticeable effect on the quality of teaching. The Manitoba Reading Study advocated the appointment of reading consultants at the local level, co-ordinated by the Department of Education, and the establishment of reading centres to which children with reading disabilities could be referred for diagnostic and corrective help. The Board supports these views, but at the same time it is well aware that such a program can only be developed over a period of time. It is also aware of the problem of securing adequately trained personnel to handle these responsibilities. The Invitational Reading Course, held in the summer of 1966, and the plans of the Faculty of Education for its graduate students are both steps in the right direction. However, as an interim measure at least, the establishment of specialist certification in reading, available to experienced and competent elementary teachers with leadership potential, might prove to be a faster procedure in the recruitment of appropriately qualified personnel in the required numbers.

The Board further believes that the trend already evident in Manitoba to emphasize the supervisory functions of the school principal is one that must be encouraged. In this regard, it is becoming increasingly important that elementary school principals "have extensive knowledge and experience of the elementary school curriculum and administration. Further, that they be required to assume responsibility for their supervisory role of guiding teachers in the instruction of reading." [6]

RECOMMENDATION

That the Department of Education encourage the appointment of reading consultants at the local level and, as a means to secure the necessary qualified personnel, request the University of Manitoba to provide courses that would lead to specialist certification in Reading.

7. TEACHERS AND PARENTS

It is highly important that parents should understand the reading policies and procedures of the schools. In this regard, the Board believes that much of the present misunderstanding about reading in the minds of parents could be alleviated if they were more aware of the methods used. The recent

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[6] Manitoba Reading Study Questionnaire Report, Ch. III, Part E (Role of the Administrator)

Saturday morning television series is an example of what might be done at the central level and even though it was designed primarily for teachers, many parents no doubt could draw benefit from it. In large measure, however, this can best be done effectively at the local level.

RECOMMENDATION

That school districts and divisions be encouraged to establish a public relations program to acquaint parents with the reading teaching methods used in their schools.

IN CONCLUSION

Mastery of the many skills associated with the art of reading is recognized by all as an essential ingredient in the total process of education.

Much has been written and more uttered on this subject, both in general and with particular reference to the Manitoba scene, than on any other facet of the school's curriculum.

It has been contended that, because of the lack of emphasis on articulated phonics, our present methods of reading instruction are inadequate and evidence for this contention has been sought amongst the levels of performance of younger and older students alike.

On the basis of its studies and the very large volume of material presented to it, the Board has been unable to find conclusive evidence to support the claim that the articulated phonic method of instruction is superior to the conventional approach where phonics are taught as an integral part of the program. In consequence, the Board has reported "that no one book nor its brand of teaching has the answer to all questions" and that, in view of the many skills that are involved in reading, it is unwise to place undue emphasis on the relative merits of "sight" and "sound"; rather that each has an important part to play.

If, as undoubtedly should be the case, the individual needs of each child are considered first and foremost, it is clear that a variety of approaches is necessary to ensure success in the acquisition of reading skills.

Undoubtedly, there is much excellent instruction in reading being provided in Manitoba classrooms. At the same time, there is room for improvement which can be provided through enhanced teacher training, flexibility of curriculum, the adoption of a wide variety of teaching techniques, the availability of a broader range of materials, modification of the grade system to permit more natural progress, and the provision of adequate supervision.

It is ultimately therefore in a pattern of teaching geared more specifically to the needs of each child that progress will be brought about, not through an attempt to identify a particular framework of methodology into which all children are expected to fit.

SUMMARY OF RECOMMENDATIONS

1. That the Manitoba Reading Program remain under continuous evaluation and review in all its aspects to ensure a pattern of development that is sequential, continuous, flexible, and up-to-date.
2. That in-service training in reading be provided for teachers on a continuous basis and that courses in developmental reading, diagnostic and remedial techniques, and children's literature be incorporated into the program for teachers in training at the Faculties of Education.
3. That no single method of reading instruction be advocated and that teachers be encouraged to utilize a wide variety of appropriate techniques of teaching to meet the varying individual needs of children.
4. That elementary schools be encouraged to build up a stock of supplementary reading materials, in conjunction with the development of a central school library and that the grant structure be so modified as to bring this about.
5. That a study be made of the present grade system in the elementary school with a view to its replacement by an alternative form of vertical organization more suited to the natural rate of pupil progress.
6. That the Department of Education encourage the appointment of reading consultants at the local level and, as a means to secure the necessary qualified personnel, request the University of Manitoba to provide courses that would lead to specialist certification in Reading.
7. That school districts and divisions be encouraged to establish a public relations program to acquaint parents with the reading teaching methods used in their schools.

APPENDICES

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APPENDIX A

CERTIFIED COPY of a Resolution agreed to in the Legislature of Manitoba on Tuesday, May 1st, 1962, on motion of Mr. CAMPBELL, as amended by Mrs. MORRISON.

WHEREAS a high standard of education is one of the greatest benefits the Province of Manitoba can provide for its youth, and

WHEREAS the ability to read well is essential in securing a good education and in using and expanding that education in later life, and

WHEREAS the teaching of reading in the schools of the Province is therefor of paramount importance in equipping our students to make the best use of their academic years and subsequent careers, and

WHEREAS many teachers, parents, trustees and students are of the opinion that the program presently authorized by the Department of Education for the teaching of reading in the elementary grades should be carefully re-examined with a view to its improvements in the interests of all students,

AND WHEREAS the Education Department Act has been amended to provide for an Advisory Board whose responsibility includes the continual assessment of the curricula of the schools;

THEREFORE BE IT RESOLVED that the Advisory Board established under The Department of Education Act be requested to examine the program for the teaching of reading in elementary grades with a view to its improvement.

Charland Prud'homme
Clerk of the Legislative
Assembly of Manitoba

APPENDIX B

BRIEFS PRESENTED TO THE ADVISORY BOARD

The following presentations on reading, written and/or in person, were made to the Advisory Board or directed to it during the period December 6, 1962 - April 22, 1966. A number of these were at the request of the Board itself:

Mr. A. D. Thomson, Assistant Superintendent,
Winnipeg School Division No. 1

Mrs. E. Richardson, Elementary Supervisor,
Fort Garry School Division No. 5

Professor L. D. Baker, Faculty of Education, University of Manitoba

Mrs. B. Turner, Manitoba Teachers College

Mr. and Mrs. E. G. Johnson, Citizens

Miss K. Wilson, Primary Supervisor, Winnipeg School Division No. 1

Mrs. E. G. Johnson, Citizen

Mr. R. F. Lee, Inspector of Schools

Mrs. H. E. Carsted, Citizen

Miss E. Cox, Principal, Lord Roberts School and Chairman,
Primary Language Arts Curriculum Committee

Mr. D. A. Duncan, Director of Research,
Winnipeg School Division No. 1

Dr. Andrew Moore, Trustee, Winnipeg School Division No. 1

Mrs. P. G. Harkins, Citizen

APPENDIX C

ENGLISH GRADES I - VI

Report of Committee on May 26, 1959.

PRIMARY READING

1. The Suitability of the Curriculum Foundation Readers in These Grades

The present programme of reading for the primary grades presents a full and balanced course in the reading skills. It is based upon research in this area, and represents the thinking of the majority of the experts in the field.

2. The Use of the Teachers' Manuals

The Teachers' Manuals, commonly called Guidebooks, contain the programme. Included are all of the phonics (word attack skills), all of the words to be taught as sight words, the related practice, the correlated activities, in fact the modus operandi. Without the guidebook, the texts themselves could not produce a good reading programme.

There is some concern about the size of the Guidebook, particularly of that for Grade I. All steps to be followed for each of the stories are outlined in detail. Perhaps, as the programme progresses, some of these steps could be reduced considerably - presuming, of course, that the teacher will not consider that her treatment of that step should be reduced also.

It might be that the authors wrote extremely detailed Guidebooks with a purpose. A teacher with no background of the psychology of reading, and with no imagination and/or "sparkle" can, by following the Guidebook implicitly, develop a reading programme containing all the required elements. However, the guidebooks do not aim to provide the abundance of drill and review material required in meeting individual needs. This apparent weakness is actually a fault in teaching rather than of the programme. The Guidebook does not indicate that a word-attack skill (phonics) taught one day should be reviewed the next day and on any other occasion when it seems necessary. Surely, the authors have expected that teachers would have sufficient knowledge of the learning process to know that repetition in phonics is as necessary as it is in, shall we say, sight words and in the addition facts. The guidebooks do provide ample direction as to types of materials and teaching techniques needed in best serving individual needs. In this highly complex area of skills where success is paramount, it would seem wise for inexperienced teachers, with little understanding of reading and of children, to follow the Guidebook in all its details. Only in this way can one be assured that important elements are not omitted from the programme. To more experienced teachers, "the Guidebook suggests"; "This Guidebook is designed to offer suggestions . . . ", but, "ingenious teachers will find many other ways . . . " The intent of the authors is obvious.

Some thought was given to the use of the guidebooks in a multigraded rural school. It is felt that no teacher in such a school could carry on the programme as set out. Possibly someone with more rural experience could suggest the necessary changes to make the guide truly what it purports to be for those teachers.

With specific reference to the teaching of phonetics in the programme, an examination of the guidebooks will dispel any question as to provision for its teaching. Timing of presentation, however, is so arranged that new elements are introduced in small doses continuously through the primary grades, rather than concentrated at the Grade I level, followed by full scale reteaching in succeeding grades. The average Grade I pupil is not expected to be an independent fluent reader in the broad sense. However, in Grade IV the average child will not only be fluent and independent in reading, but he will possess sure knowledge of the use of several reading techniques of which the use of the phonetics will be one. His knowledge will be secure because concepts of understanding and of meaning will have been stressed consistently throughout the programme. This procedure advocated in our reading programme, of a graduated thorough approach in the acquiring of varied reading skills is based on research findings concerning the laws of learning. Its effectiveness is recognized.

In this programme, single letters are not articulated in order that the child may be able to "say the sound" of the letter. Rather, the child is taught to derive the sound from known sight words which have the same initial consonant, for example. Critics of the programme believe firmly that because the phonics are not articulated, they are not taught. By Grade III much work in syllabication has been done and it is the syllable which is considered to be the unit of pronunciation.

3. The Use of Supplementary Materials

"Concrete help for the teacher in the selection of stories to be read aloud to the children and of picture books to be placed on the library table is contained in the bibliography given at the back of this Guidebook" (page 8, Primer Guidebook). "Concrete help for the teacher in setting up a practical programme of independent reading is contained in the bibliography given at the back of the Guidebook" (page 11, First Reader Guidebook).

The bibliography as a source of help in building a library of resource material could be used to advantage much more widely than it is. Without looking closely, it would appear that there may be at least two factors operating: (1) The books listed are not available in the schools. This may be due to the lack of correlation between the Guidebook and the library list from which books for the primary grades in rural schools are selected, and/or, as the guidebooks currently authorized were published in 1946, it is very possible that books listed therein are now out of print, and (2) apparently, many teachers are not aware of the importance of supplementary materials in building reading skills.

The diagnostic value of the Think-and-Do book is obvious. The teacher, for example, has in oral discussion with a group of children given training in making judgments and classifying as suggested on page 72 of the Guidebook (Level 1 - 2). But when those same children use page 20 of the Think-and-Do book (for Our New Friends), the teacher may discover that one or two children failed to understand the relationship which was the basis for the judgment made by the group. Such children need more developmental work in classifying.

Conscientious study of the individual child's reaction to each page in the Think-and-Do book enables the teacher to prevent reading disabilities and to provide individual developmental work as needed. Such a programme carried out over a period of time means the substitution of planned developmental work for much of the so-called "remedial work" that has been necessary with children who have not been successful in the early stages of reading.

4. Current Practice in the Schools

Practice in the schools varies from teacher to teacher and from school to school. Because the teaching of reading involves the teaching of a series of skills, and because this programme is developmental in nature, it would seem to be the height of folly for teachers to deviate markedly from the programme laid down. The sufferers, in such cases, are the children who have gaps in their learning, and who, when in Grade III and above, require remedial work which is no fault of their own. In the hands of an informed and sincere teacher it proves most effective in practice.

However, no one has yet prescribed the one way to teach all children. When an approach to any subject matter fails with some children and yet works with the majority, teachers should be expected to alter their techniques, so that those with whom the first has failed may be taught the skills in some other way.

APPENDIX D

THE TEACHING OF READING, ROYAL COMMISSION ON EDUCATION MANITOBA, 1959

THE TEACHING OF READING

25. One of the most vexing problems placed before the Commission was the teaching of reading in the elementary school, especially in Grades I, II, and III. In its effort to arrive at worthwhile recommendations regarding reading, the Commission sought the advice of experts in the field, examined the latest publications, interviewed authorities connected with education in England and the United States, visited classes in reading in the Greater Winnipeg area and in Brandon, and classes in Primary Methods at Brandon Teachers' College and at the Manitoba Teachers' College. An earnest effort was made to find an answer to the question, "What method of teaching reading should be recommended for the Province of Manitoba?"

A. Methods of Teaching Reading [8]

26. In general, the methods of teaching reading fall into two groups: those which emphasize the elements of words and their sounds, and thus lead to word recognition; and those which start with words or larger units and aim at understanding the meaning of what is read.

Methods which emphasize the elements of a word

(1) The Alphabetic method

27. This method of teaching reading began in ancient Greece and Rome and persisted until almost the end of the nineteenth century. After learning the alphabet, the pupil learned to spell and pronounce two, three, four and five-letter combinations forming syllables, words, or sometimes nonsense units. The syllables were combined into words, and the words into phrases and short sentences. Repetition was relied upon to lead to mastery. Only after a considerable amount of practice was real reading begun.

28. The objections raised against the method are:

(a) The sounds of the names of the letters do not always indicate the pronunciation of words.

(b) Pupils frequently resorted to guessing the word, basing their guess on the sounds of the names of the letters.

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[8] In this and the following section much reliance will be placed on the volume The Teaching of Reading and Writing by William S. Gray, published in 1956 by the United Nations Educational, Scientific and Cultural Organization and distributed by Scott, Foresman and Company 433 East Erie Street, Chicago, Ill.

(c) The content of the reading lessons was not based on children's interests.

(d) The endless repetition on which the method was based frequently engendered a dislike for reading.

The alphabetic method is little used today.

(2) The phonic method

29. The phonic method is based on the principle that the sounds of letters (not their names) when uttered rapidly will produce the word. This principle is quite logical for those languages in which there is but a single sound for each letter or combination of letters. In the phonic method, the sounds (not the names) of the vowels are taught, then the consonants, then combinations of vowels and consonants to form syllables. Finally, syllables are combined to form words.

30. Most authorities in reading agree that the chief advantage of the phonic method is its use of the sounds of letters, or phonograms, in word recognition. Furthermore, the phonic method is said to be logical, economical, carefully graded with respect to the phonetic elements, and easy to apply.

31. The method is said to have the following limitations:

(a) Consonants cannot be sounded accurately in isolation; if learned in isolation, they cause confusion when there is question of their pronunciation in a word.

(b) Meaning is sacrificed to the struggle for word recognition.

(c) The formal repetition of meaningless elements creates a dislike for reading.

As a result of these criticisms the phonic method has undergone many changes, the aim of which is to emphasize meaning and to create interest in the content of what is read.

(3) The syllabic method

32. In this method the sounds of syllables, not those of letters, are taught. When syllables are learned they are combined to form words.

33. Advantages claimed for the method are:

(a) It presents a logical arrangement of material.

(b) It provides a method for attacking new words.

(c) It is easy to teach.

(d) The entire course of basic instruction can be included in a relatively small amount of material.

34. The chief arguments advanced against the use of the method are:

(a) It puts too heavy a load on the pupil's memory in the early stages, unless he is taught to recognize syllables in words at the time he first learns them.

(b) If too many purely syllabic charts are used at the beginning, the pupil may lose interest before he begins to read sentences and stories.

(c) If the materials are too difficult at first, or advance too rapidly, the pupil may become a "word caller" unable to understand all the words he can pronounce.

Methods which emphasize meaning from the beginning

35. These methods are based on the assumption that meaningful language units (words, phrases, sentences) should be the starting point. When these units have been recognized, they are analyzed into their elements. There are two general arguments advanced in favor of this approach. First, it is argued that reading is essentially thought-getting, therefore meaningful material should be used from the beginning. The result will be to awaken interest and thus hasten progress. Secondly, it is claimed that the method follows the children's natural mode of perception from wholes (more or less vaguely recognized at first) to gradual recognition of details.

36. It is objected, however, that all the effort at forming attitudes and skills needed in getting meaning results in neglect of word recognition. Teachers may neglect to develop word recognition so long that children become seriously retarded in this aspect of reading. Indeed, some teachers leave the matter of word recognition to the pupil's own unguided effort, with unfortunate results. Furthermore, teachers who have not been specially trained in the methods find them difficult to apply.

(1) The word method

37. In this method words are usually presented in a meaningful setting and learned largely by the "look and say" method during the first few lessons. The basic assumption used here is that each word has a characteristic form by which it can be remembered. Tracing a word, and the use of pictures to illustrate the word are devices employed to help slow learners and to establish meaningful associations. Very early in the method attention is directed to details of words, such as syllables and thus letters and sounds. These elements are then used in training pupils to recognize and pronounce new words independently and accurately. If the word method is not accompanied by the analysis of words into their elements, it should not be classified as an analytic method.

38. Reading specialists have supported the word method on the following grounds:

(a) Individual words are basic units of both thought and recognition,

(b) Since attention is focussed from the beginning on the meaning of what is read, a thoughtful reading attitude and keen interest are both fostered.

(c) Learning words first as wholes, then as wholes composed of parts or elements, is the normal way most children learn visual forms.

39. The most frequent criticism of the method is that, because word analysis is often delayed or sometimes neglected altogether, pupils fail to develop the necessary accuracy and independence in word recognition with the result that there is considerable retardation in reading.

(2) The phrase method

40. The phrase method is based on the assumption that phrases are inherently more interesting and meaningful than words, therefore phrases, not words, should be the basic element in teaching reading. Though it does place added emphasis on meaning, it has been found to be uneconomical of time and has been generally discarded.

(3) The sentence method

41. Proponents of this method say that the sentence, not the phrase or the word, is the true unit of language and should be adopted as the unit in reading. In practice the pupils prepare their own reading lesson. An interesting object or activity is discussed in class; one of the statements made is written by the teacher on the blackboard and read by the teacher with expression to give the meaning intended. Pupils are then directed to find important groups of words in the sentence, then specific words in each group. Eventually a sight vocabulary is built up. Finally, attention is directed to the elements of words.

42. Advantages claimed for the sentence method are:

(a) It is in keeping with the "gestalt" concept of learning whereby wholes are learned before parts.

(b) It stresses meaning and thus stimulates interest.

(c) The pupil is aided by the context.

(d) It is said to prevent word-by-word reading.

(e) If properly used it results in accuracy and independence in word recognition.

43. Three criticisms have been offered of the sentence method:

(a) If sentences not related to the experience and interests of children are used to introduce the reading lesson, meaningful associations are not developed, and learning will be slow.

(b) In actual practice so much attention is paid to the meaning of what is read that the basic skills of word recognition are postponed or not developed.

(c) It is a misapplication of the "gestalt" theory to start with the sentence as the "whole" first to be learned and only later analyzed into its phrase, word, syllable, and letter parts.

(4) The story method

44. The story, or a sequence of sentences, is the basic unit in this method. The story is told first by the teacher in her own version, then discussed and possibly dramatized by the pupils until all ideas and words are known. Then the printed version is studied, sentence by sentence. Finally words and their

elements are studied, and the knowledge of these elements is used in the recognition of new words. The method is said to have real advantages, since it emphasizes all the skills needed for efficient reading.

45. In criticism of the method it is said that pupils rely largely on memory when reading the lesson, and when this fails they resort to guessing to supply unknown or unrecognized words. This same habit of guessing carries over into the reading of new material.

B. Evaluation of Methods

46. Having in mind the huge volume of educational research, especially in reading, undertaken in the universities since the turn of the century, one would expect to be able to find a clear-cut answer to the question, "Which is the best method of teaching reading?" Nevertheless, Wm. S. Gray states:

> ... experimental studies of the relative merits of specific methods of teaching reading do not show conclusively which method is best; they indicate rather that some methods further progress in certain aspects of reading and other methods in still different aspects. ... each has advantages and weaknesses.[9]

47. That the experimental research did not result in conclusive findings seems to stem from inherent weaknesses in the design of the experiments themselves. The following is a list of the weaknesses that are said to have been common to many of these experiments:

(a) Experiments were carried out under very different conditions.

(b) Teaching procedures varied considerably.

(c) In very few experiments were all factors sufficiently well controlled.

(d) The comparative intelligence of children in the experiments was not known.

(e) The general efficiency of the teachers was not considered.

(f) The form in which the passages were printed favored the groups which had learned to read by sentence wholes.

(g) "The teacher's personality, the enthusiasm of the children, the correctness of the habits they were forming, their rate of silent and, in most cases, oral reading, were not measured."

(h) There were no data on the background and mental ability of the two groups, the efficiency of the teachers, or the nature of the learning situation.

Not all of these weaknesses existed in every piece of research considered by Gray, but in his opinion enough of them occurred to render invalid any general conclusion.

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[9] Gray, op. cit., p. 12.

48. Gray points out that the research, although it does not indicate conclusively which of the methods used exclusively is best, does point to certain facts and principles:

(a) No matter which method of teaching reading is used, not all pupils in a group make the same progress.

(b) Different methods of teaching produce different results:

i) The conclusion in one study was:

> If the primary emphasis is placed on word recognition, the outcome is the ability to follow the printed lines, to pronounce all the words, but to display no vital concern for the content. It produces what is familiarly called word reading. ... On the other hand, when the chief emphasis is placed on thought, ... pupils become interested in content, but develop more slowly in word recognition and in ability to follow the lines. [10]

ii) In another study, the conclusion was:

> The phonic groups so concentrated upon letter sounds that attention was diverted from the sense of the paragraph to word pronunciation. This brought about boredom and fatigue and destroyed the pleasure which the story should yield. The reading was generally less smooth, slower, and the ideas confused. The groups which were not taught phonics were found to enjoy reading for its own sake. From the story they got the sense. They were less careful and less correct than the phonic groups with regard to pronunciation. Keeping the sense in mind, they often substituted words from their own vocabulary for difficult or unfamiliar words in the text. They read more swiftly and with more expression. Fatigue was reduced, because the story held their interest and they were intent on the outcome.[11]

(c) Good initial progress in reading results from emphasis on both meaning and word recognition. In several studies a comparison was made between the pure phonetic method of teaching reading and a combination of the phonetic and word methods. The combined method appeared to be superior, save that pupils taught by the phonetic method were better in spelling.

49. Other and perhaps rather more recent works offer statistical evidence which, their authors claim, shows the superiority of both predominantly phonic methods and of the sight method if it is supplemented with pure phonics instead of the "sensed" phonics usually employed in it. Terman and Wolcutt in Reading, Chaos and Cure, give the results of several experiments which they contend

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[10] Ibid., p. 108.

[11] Ibid., p. 109.

clearly demonstrate that the sight method even as now used with "sensed" phonics is inferior to some of the more phonic methods which in recent years have been adopted in many schools in the United States. Terman and Wolcutt would not agree with Gray that experimental research has not proved anything about the best method of teaching reading.

C. The Current Manitoba Method

50. The textbooks authorized for instruction in reading in Grades I, II and III, form part of the Curriculum Foundation Series: The Basic Readers, 1946 Edition. The authors of the series are William S. Gray, Lillian Gray, and Marian Munroe. The publishers are Scott, Foresman and Co. of Chicago, whose Canadian representatives are W. J. Gage and Company of Scarborough, Ontario.

51. The titles of the texts used in each of the grades are as follows:

Grade I:

We Look and See (First Pre-Primer)
We Work and Play (Second Pre-Primer)
We Come and Go (Third Pre-Primer)
Fun with Dick and Jane (Primer)
Our New Friends (Book 1)

Grade II:

Friends and Neighbors
More Friends and Neighbors

Grade III:

Streets and Roads
More Streets and Roads

52. Workbooks are available for use at each grade level, together with numerous teaching aids and a series of Basic Reading Tests. The principal aid in the correct and adequate use of the textbooks is a "Teacher's Guidebook" for each grade.

53. The method of teaching reading through the use of the Curriculum Foundation Series is treated exhaustively in the "Guidebooks"". Briefly summarized the method consists in teaching:

(a) a stock of sight words;

(b) word attack skill, including

i) meaning clues from the context,

ii) appearance of words,

iii) structural clues,

iv) phonetic clues,

v) dictionary.

The authors believe that the use of these five methods of attacking new words gives better results than any one method used singly.

54. It is worthy of mention that there now exists a new series of readers, called "Curriculum Foundation Series New Basic Readers 1952 Edition". According to the authors (Gray, Gray, and Munroe):

> The New Basic Readers place a stronger emphasis on interpretation; lay a broader foundation for success in reading at the pre-reading level; have a practical program for meeting special needs, and present a rich program in literature.[12]

The vocabulary is the same as in the older series, but more frequent repetition is provided. The authors believe that the new series is superior to the old one.

D. Conclusions and Recommendations

55. After lengthy discussion and many consultations with authorities in the field of reading, the Commission came to the opinion that an adaptation of the sight and phonic methods holds greatest promise for the effective teaching of reading in the primary grades in Manitoba schools. The essential difference between the two methods lies in the way a child is taught the sounds of consonants. Gray, on page 155 of the Guidebook, insists that consonants should never be sounded in isolation; he maintains that true consonant sounds are founds only in words. On the other hand, the proponents of the phonic method claim that even if the consonant sound in isolation is only an approximation to the true sound as heard in a word, it is sufficiently close to the true sound to serve as an aid in word attack. Gray asks pupils to deduce the sound of a consonant from his ability to pronounce several sight words in his vocabulary. Thus, Gray reasons, if a child knows "now", "not", and "never", he will deduce the beginning sound of the word "name". The advocates of the phonic method would say, rather "Teach the child the sound of the letter 'n'."

56. The Commission recommends that after an initial stock of sight words has been taught, the teacher should teach the sounds of the letters, even the consonants, and thus give the child, almost from the outset, two methods of attacking new words. Advocates of the sight method have stated to the Commission that in the case of retarded readers it has often proved helpful to teach letter sounds in isolation; the Commission has come to believe that there is benefit for all beginners in reading to have the use of this method of word attack.

57. If beginners in reading are taught letter sounds in isolation, the Commission believes that parents will find it possible to help their children to learn to read at home, if they have need of help. Since parents generally do not understand the sight method of teaching reading (it takes many hundreds of pages in teachers' guide books to assist teachers in following the method), they seem unable to help youngsters who are experiencing reading difficulties. If both teachers and parents use the phonic method of attacking words, the child will not be confused by his parents' efforts to help him. Evidence that some confusion now occurs may be found in the quite prevalent notion, not wholly unfounded we believe, that teachers frown on attempts by parents to start their

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[12] Gage Books 1959. Toronto: W. J. Gage and Co., 1959, p. 38.

children in reading before they start school, and on help with reading given by parents to their children after they start school.

58. With this change, slight though it may seem, the Commission believes that what is best in both methods will be put at the disposal of the child who is learning what is admittedly a very complex skill. Furthermore, this change can be made without abandoning the Curriculum Foundation Series or the Guidebooks that accompany it. However, the use of the phonetic attack as here recommended must be taught at the 'Teachers' Training College, and articles devoted to this topic should appear in the Manitoba School Journal for the benefit of teachers already in the field.

59. Members of the Commission who visited classes in primary reading which were supervised by reading specialists were impressed by the distinctly better pupil performance, on the average, as compared to the generality of classes in reading where the services of reading supervisors were not provided. It seems that the supervisors gave help not only in methodology, but also in providing the continuity of effort from one year to the next, which is essential to success. Inasmuch as there is provision in the grant schedules for grants toward the salaries of supervisors, the Commission is of the opinion that School Boards should engage the services of supervisors of reading whenever the number of primary teachers in their employ warrants such appointments.

APPENDIX E

FROM THE ELEMENTARY CURRICULUM SEMINAR REPORT, July 1964

English

The interrelationships existing between all facets of English must be recognized. In particular, the programmes in Oral and Written English and in Reading must all be aimed at enabling pupils to develop communication skills.

I Reading

(1) Objectives of the Reading Programme

(a) To increase the pupil's ability to perform the two major acts involved in reading, i.e., recognition of the printed word and the interpretation of the meaning intended.

(b) To foster reading as a source of interest and enjoyment.

(c) To enable the pupil to utilize reading skills for a wide variety of purposes.

(2) General Principles

(a) Because reading is a complex process, no single teaching method can be regarded as adequate. It is necessary that provision be made for the use of a variety of methods and materials.

(b) Within the framework of suitable methods and materials indicated above, the teacher should be free to select those applicable to a given situation. Flexibility should be one of the main characteristics of the reading programme.

(c) Although the reading programme may place a major emphasis on the development of reading skills as such, due attention should be paid to functional and recreational reading.

(d) Because the development of reading skills is a continuous process, and because more difficult and more varied reading situations demand additional skills, reading should be taught throughout all elementary grades and also, the Seminar believed, be included in the high school programme.

(e) It should be recognized that the concept of readiness applies to the teaching of reading at all levels.

(f) Grouping should be employed at all levels where it is feasible in order to help meet the specific needs of pupils, to provide for maximum participation by individuals, and to facilitate continuous progress.

(3) Specific Recommendations

(a) That the curriculum include suggested reading programmes suited to more able and less able pupils as well as to the so-called "average" child.

(b) That provision be made for the breakdown of the programme into convenient blocks, several blocks comprising a year's work. This system is not incompatible with a graded organization and may be adequately fulfilled through such means as, for example, a modification of the "Joplin Plan". Such a division in the later grades should help to ensure the continuation of grouping which is a common characteristic of primary classroom procedure.

(c) That the programme indicate clearly those reading skills to be emphasized at each grade level and point out the need for continuous review and work on skills introduced at earlier levels. The need for mastery should be stressed.

N.B. Care should be taken in the selection of skills to be stressed, e.g., the amount of work now demanded in syllabication might well be questioned.

(d) That the attention of teachers should be drawn to the need to recognize and to accept the limitations of individual pupils, while at the same time striving to help those pupils develop optimum competence. To this end, the programme should contain specific suggestions for assessing the individual's progress in reading and for diagnosing special difficulties. Provision should be made for a listing of formal and informal tests, together with a brief description of each test listed.

(e) That the programme should provide guidance with respect to correctional procedures. It should be recognized that, in spite of good teaching methods and materials, some pupils will fail to develop reading skills in keeping with their ability.

(f) That attention be drawn through the programme to those specific reading skills that may be developed through and contribute to the various content subjects.

II Language

(1) General Recommendation

That the Language sub-committee examine the opportunities afforded by an emphasis on the inductive rather than the deductive method and by the employment of the exploratory approach in the development of concepts.

N.B. Because consideration of the exploratory approach to language is recommended, and because in this approach error is implicit, it follows that error should be treated positively rather than negatively.

(2) Specific Recommendations

(a) That stress be placed on the oral aspects of the language programme and specific suggestions as to introduction, development, and evaluation be included in the programme. In this connection, speech training should become an integral part of the language programme.

(b) That, in order to develop to the full the individual's ability to write and through this writing to give fulfilment to his emotions and thoughts, emphasis be placed on motivation and the provision of a conducive atmosphere for literary expression.

(c) That formal aspects of the teaching of language be closely related to written and spoken English.

(d) That, in conjunction with the general recommendation above, the feasibility of introducing structural grammar be explored.

III Literature

The Seminar recommended:

(1) That provision be made from the beginning of Grade I for a definite programme in literature apart from developmental reading. It suggested that the literature programme be planned on a class basis, since appreciation type lessons provide ideal opportunities for pupils to work together and for the class as a whole to gain from the contributions made by the more able members.

(2) That the programme be constructed around those concepts of literature which are valid at all levels of study, e.g., rhythm, diction, and imagery.

(3) That consideration be given to the authorization of texts beginning at Grade IV.

(4) That consideration be given to the different interests of boys and girls in the varying forms of literature.

(5) That the study of a Shakespearean play be deferred until Grade IX as recommended by the University Entrance Course English sub-committee.

(6) That the programme contain specific suggestions as to suitable teaching and resource materials such as tapes, recordings, and films.

(7) That the programme should indicate means of evaluating pupil progress.

IV Handwriting

The purpose of handwriting is communication. To serve this purpose, handwriting must be easy to write and easy to read, although aesthetic factors should not be entirely ignored.

The Seminar wished to emphasize the following suggestions:

(1) That provision be made for closely supervised daily instruction in handwriting during the first six grades, with short, intensive periods of instruction in Grades VII and VIII as required by pupil needs.

(2) That the programme make specific suggestions with respect to the teaching of handwriting skills. Some indication both of procedure and desired standards should be given for the various levels of the school.

(3) That the programme include specific suggestions for analyzing pupil difficulties in handwriting and for instituting correctional procedures.

(4) That the attention of teachers be drawn to the desirability of helping pupils assess their own handwriting.

(5) That the special difficulties encountered by the truly left-handed pupil be considered and that suggestions be made to help such pupils write easily and well.

(6) That, without minimizing quality, suggestions for training in speed be included in the programme for the upper elementary grades.

(7) That practice in manuscript writing as it is taught in the primary grades, be continued after the introduction of cursive writing so that the skill is not lost.

(8) That the attention of all teachers be drawn to the importance of insisting on a good standard of handwriting in all written work.

V Spelling

The Seminar recommended:

(1) That the recommendations contained in the brief of the Manitoba Teachers' Society to the Seminar be drawn to the attention of the subject sub-committee.

(2) That consideration be given to the multi-sensory approach as a means of producing independence in spelling.

(3) That the programme include specific suggestions for diagnosing pupil difficulties in spelling and for instituting correctional procedures.

(4) That consideration be given to the merits of teaching spelling in isolation or in relation to language skills.

(5) That spelling be retained in its formal aspects as part of the English programme to the end of Grade IX.

APPENDIX F

FINAL REPORT OF A READING STUDY QUESTIONNAIRE

MANITOBA, 1964

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FINAL REPORT OF A READING STUDY QUESTIONNAIRE

MANITOBA, 1964

Introduction

In the spring of 1963, because of widespread interest in the teaching of reading in Manitoba schools, Mr. G. M. Davies, then Director of Curricula for the Province of Manitoba, requested Mr. R. F. Lee, then Inspector of Schools for the Seven Oaks School Division, to construct a reading questionnaire to ascertain the opinions of teachers regarding texts and methods employed in reading instruction. Because such a task necessitated the skilled opinions of more than one person and because the terms of reference were not sufficiently broad to encompass many significant areas either directly or indirectly associated with reading instruction, a committee consisting of the following people was formed:

Inspector R. F. Lee
Miss Grace McClellan
Miss Grace Menzies
Miss Grace Walby

Following a period of study, it was decided to construct a questionnaire which would pursue its inquiry along similar lines to those explored by Austin, Morrison, et al [1] in the Harvard study on reading. It would seek to provide evidence of the extent to which practices essential for the success of a reading program were present in Manitoba. It was felt that a check list of desirable practices should include:

A. Evidence of an instructional program for all children, with regard to:
   1. Development of reading skills to help children identify printed words; gather meaning from words, sentences and paragraphs; and evaluate and draw inferences from what is read.
   2. Development of reading and study skills in content areas.
   3. Development of silent and oral reading skills.
   4. Development of reading interests.

B. Evidence of instructional provisions for children of varying abilities and interests.

C. Evidence of special services:
   1. For the academically talented reader.
   2. For children with reading disabilities.
   3. For all children (library).

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[1] Mary C. Austin and Coleman Morrison. The First R New York: The Macmillan Company, 1963.

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D. Arrangements for evaluating pupil progress and communicating with parents.

E. Evidence of pre-training and in-service training of teachers in reading instruction.

F. Evidence of administrative leadership.

Dr. Austin graciously forwarded to the committee copies of questionnaires constructed for the Harvard study and consented to the use of all or any part of the questionnaires in Manitoba. The Harvard questionnaires therefore, although often changed in structure and enlarged to meet local needs did form the base for the construction of the "Manitoba Reading Study Questionnaire".

In May 1964, one thousand copies of the "Manitoba Reading Study Questionnaire" were distributed to School Inspectors, Superintendents, Supervisors, Faculty of Education and Manitoba Teachers' College Instructors, supervisory and teaching School Principals, and elementary and secondary School Teachers with approximately eighty per cent of all questionnaires being sent to elementary School Teachers. Care was taken in this distribution to ensure that all types of teaching conditions would be explored.

Of the one thousand questionnaires distributed, 780 were returned. The compilation of statistics based on answers contained in the 780 replies was supervised by Miss Jessie Harrow, Assistant Director of Curricula. These statistics combined with a scrutiny of a sampling of completed questionnaires provided the basis for the report which follows.

The distribution of responses is shown by the following tables:

Table 1

Years of experience in teaching or supervision of respondents	
Nil	24
0 - 5 years	134
5 - 10 years	117
10 - 20 years	215
More than 20	197
	687

It may be seen that the questionnaires were distributed mainly to mature teachers whose opinions should be worthy of consideration. Seventy-seven per cent of the respondents had more than five years of experience.

Table 2

Grades taught or supervised by respondents

K	3	VII	37
I	131	VIII	49
II	98	IX	14
III	90	X	9
IV	55	XI	11
V	54	XII	6
VI	53	Multi-graded	96

Approximately eighty per cent of replies appear to have come from those teaching in the elementary schools. The number of responses from the secondary level is a reflection of the amount of teaching of reading found in these grades in Manitoba schools.

Table 3

Positions held by respondents

School Inspectors	23
Superintendents and Supervisors	14
Director of Special Services	1
Faculty of Education and Teachers College Instructors	4
Adjustment teachers, reading clinicians, remedial reading teachers	26
Principals	164
Teachers	437
Teacher-trainees	24
	693 reporting

Some replies represented the composite report of several staff members. These had, perforce, to be treated as single copies, and therefore created a complication as to individual position or certification.

Table 4

	Certification of Respondents
Permits	1
Letter of Authority	0
1st.	90
2nd.	40
3rd.	0
1st. A	163
1st. B	154
Collegiate	123
	571

Some respondents did not complete this section of the questionnaire.

It would appear then that the questionnaire was completed by a representative group of those concerned with the teaching of reading in Manitoba.

A number of years ago the Yearbook Committee of the National Society for the Study of Education set down eight major criteria of a sound reading program. These criteria, which are widely accepted today, suggest that a good reading program:

1. Is consciously directed toward specific valid ends which have been agreed upon by the entire school staff;
2. Co-ordinates reading activities with other aids to child development;
3. Recognizes that the child's development in reading is closely associated with his development in other language arts;
4. At any given level, is part of a well worked out large reading program extending through all the elementary and secondary grades;
5. Provides varied instruction and flexible requirements as a means of making adequate adjustments to the widely different reading needs of the pupils;
6. Affords, at each level of advancement, adequate guidance of reading in all the various aspects of a broad program of instruction: basic instruction in reading, reading in the content fields, literature and recreational reading;
7. Makes special provision for supplying the reading needs of cases of extreme reading disability, in other words, the small proportion of pupils whose needs cannot be satisfied through a strong developmental program;
8. Provides for frequent evaluation of the outcomes of a program and for such revision as will strengthen the weaknesses discovered. [2]

These criteria are general statements of the broad aspects upon which a reading program should be based. The committee selected those aspects which deal specifically with the basic components of reading instruction; provisions made to adjust to individual differences; evaluation of progress and communication with parents; attention to the professional growth of teachers and the leadership role of the administrator. These then became the major sections of the questionnaire.

I. Basic Components of the Reading Program

The school is faced with the responsibility of guiding all children toward mastery in reading. The complexity of this task is indicated by the following list of reading skills by Tinker and McCullough.

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[2] Whipple, Gertrude."Characteristics of a Sound Reading Program" Reading in the Elementary School 48th Yearbook of the National Society for the Study of Education Part II Chicago: University of Chicago Press 1949 pp. 34 - 38.

Word Meaning Through Knowledge of:

picture clues
context clues
figures of speech
idioms
colloquialisms
multiple meanings
homonyms (Do you need to consult the dictionary?)
antonyms
related words
abstract meanings
enriched word meanings ("home")
synonyms
definitions
analogous words
connotation
effect of accent on word meanings
denotation

Word-Form Analysis Through Knowledge of:

consonants
consonant blends
consonant digraphs (See dictionary again?)
vowels
vowel diagraphs
vowel diphthongs
phonograms
compound words
hyphenated words
possessives
contractions
how letter position affects accent
plural forms
variant endings of verbs
adjective and adverb endings
prefixes
suffixes
stems or roots
syllables
rules governing the above

Comprehension and Interpretation Through Observation of:

phrase meaning (including imagery, vividness, point of view, repetition as style technique, onomatopoeia, cadence, rhythm, stress by word order, phrasing; interpretation of colloquialism, idiomatic expressions, sentence fragments)
sentence meaning (including depth of comprehension)
main ideas (paragraph, section, chapter, story, or book)
details of facts
sequence
organization
manner of presentation of ideas
contrast
comparison
cause and effect
relevance or irrelevance
basis for evaluation or judgment of ideas, interpretation, organization, and author purpose
implications beneath surface facts

Study Skills Applied in:

card catalogue
table of contents
telephone book
encyclopedia
textbook

dictionary (alphabetical order, general location, guide words, base word as entry, pronunciation, derivation, part of speech, meaning, use of different dictionaries with different pronunciation keys)
index
time tables
menus
radio, TV, schedules
posters for information
signs
maps
graphs
charts
diagrams
directions
adjusting method of reading to purpose
adjusting method of reading to material
choosing topic for a report
selecting facts from material
taking notes
classifying material
outlining and planning report
making pictorial representations of data

Oral-Reading Skills Development Through:

setting standards
evaluating
noting effect of punctuation
studying stress appropriate to meaning
using breath control to accommodate phrases
altering voice for different characters, moods, and meanings
adjusting speed to the audience and subject matter
projecting and modulating voice to room conditions [3]

The objectives of a reading program are achieved when the children have acquired mastery of these skills and the habit of using them to acquire information and to enjoy the printed word. Therefore, these components of the reading program became an essential part of the questionnaire with items on beginning reading instruction, word recognition, comprehension, critical reading, oral reading, and the availability and use of reading materials.

II. Individual Differences, Special Services, and Library Services

The second area dealt with in the questionnaire focussed on provision for individual differences and special services including library facilities. One of the most outstanding facts about any classroom is the variation among the children. The children will differ in experience, motivation, predisposition towards learning, achievement and ability. The range of achievement in reading is apt to spread over many grades. In recent testing of nine fourth grade classrooms for example, grade equivalent scores ranged from 2.7 to 9.0. The teacher's task is to provide meaningful instruction for all. The problem is intensified by the fact that any given score is formed of diverse reading abilities - that is, four children may have identical scores in a test, but one may have scored particularly high in word meaning; a second in comprehension; a third may have read rapidly but inaccurately; a fourth may have read extremely slowly and accurately. All four will have different instructional needs even though their reading scores are identical.

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[3] Tinkler, Miles A. and McCullough, Constance M. Teaching Elementary Reading. New York: Appleton-Century-Crofts, Inc., 1962, Chapter 1.

Therefore, the committee developed questions with respect to current grouping practices. Methods used elsewhere to meet this problem e.g. non-graded schools, individualized reading and programmed instruction are not in general use in Manitoba. However, the questionnaire provided an opportunity for teachers to express their opinions with regard to the desirability of trying these methods of coping with individual differences.

Special services are required for those at either end of the spectrum of ability: at one end the academically talented children whose ability should be fostered so that they might reach their maximal development; at the other end the children with reading disabilities who without special help may become the drop-outs and social misfits of society. Therefore it was considered important to seek information through the questionnaire on the provisions made in Manitoba schools for these two groups of children.

For several years educators have stated that the school library is an essential component of an adequate reading program. It was felt that many Manitoba schools (especially elementary schools) have been operating with only small classroom libraries. In order to obtain an estimate of the extent and adequacy of school libraries several items in this area were included in the questionnaire.

III. Evaluating, Recording, and Reporting Pupil Progress

Throughout the child's school life his progress must be evaluated and information transmitted to parents, school administrators and succeeding teachers. The way in which this is done affects each child and his relations with his peers, siblings, parents, and teachers. Therefore, the questionnaire included items on: testing, programs, promotional policies, and reporting to parents.

IV. Professional Growth of Teachers of Reading

The success of the classroom teacher in reading instruction depends on a number of factors including the preparation she receives before entering the profession and the guidance and continuing education given to her after she begins to teach. This section of the questionnaire, therefore, was concerned with the pre-service and in-service education of teachers.

V. The Role of the Administrator

The final section of the questionnaire dealt with the leadership role of the administrator. Within any school system someone must take the responsibility for formulation of policy, guidance of the teachers and evaluation of instruction. Therefore items were included in the questionnaire to explore: 1. what personnel assumed responsibility for selected aspects of the reading program and

2. functions assumed by various personnel. An attempt was also made to determine the extent to which professional journals in reading were made available to school staff.

The questionnaire therefore covered five main areas related to reading instruction:

1. Components of the Reading Program.
2. Provision for Individual Differences; Special Services and Library Facilities.
3. Evaluating Recording and Reporting Pupil Progress.
4. Professional Growth of Teachers of Reading.
5. Role of the Administrator.

CHAPTER II - FINDINGS OF THE STUDY

Part A

COMPONENTS OF THE READING PROGRAM

This section of the report deals with the components of the reading program and is divided into seven sections: an adequate definition or understanding of what reading really involves, the question of how early reading instruction can wisely be begun, initial reading experiences and readiness for formal reading instruction, skills of word recognition, comprehension and interpretive skills, oral reading practices and materials of reading instruction.

Definition of Reading

Because some critics of the program of reading instruction seem to see reading as a rather mechanical process of recognizing written and printed symbols the questionnaire committee believed it would be wise to include a question in this section which would determine how teachers of Manitoba define reading. Approximately two-thirds of the respondents favored a definition of reading which dealt with literal interpretation, while the remaining one-third saw reading as an experience in evaluation of the printed passage and as a thinking process. No one reported believing it to be the mere mechanical perception of words.

Modern educators tend to think of reading in fairly broad terms as a thinking process in which the reader grasps meaning and reflects upon the significance of the ideas expressed. At a higher level still the reader may evaluate critically and apply new information in the solution of a problem. Reading is seen as a complex art involving many skills.

Early Reading Instruction

Reading in the Kindergarten - One hundred and seventy-six respondents indicated kindergartens existed in their districts. Of these, 14% provided a program in reading instruction beyond the readiness level. The reasons given for not providing a reading program in kindergarten are that the school philosophy did not encourage it and that there were insufficient trained personnel to handle such a program. Teachers were asked their opinions as to the value of teaching reading before the age of six. 57.9% believed that early achievement in reading influenced favorably later school progress and attitudes.

Austin and Morrison report that current practice in the U. S. A. does not generally favor extending formal instruction down to the kindergarten level. Opinion for and against runs half and half among the educators with twenty-five per cent of those who are for early instruction in favor of it only if the children are able. Some would favor putting such children into Grade One for the regular program. The question really is whether or not a formal program of reading instruction that extends beyond pre-reading activities should be provided for some children, for all of them, or for none.

Kindergartens are not generally found in all areas of Manitoba.

Admission to school in Manitoba is based on chronological age alone. Austin and Morrison report that 65% of school systems studied permitted children to enter school at six years of age with a cut-off date usually of December 1st or January 1st. A small number of systems also consider physical factors, social and emotional maturity, linguistic ability, experiential background, pre-reading experiences, mental maturity, readiness tests, teacher judgment, kindergarten reports, advice of a child guidance clinic, and opinion of parents.

Readiness - Teachers were asked to note the frequency with which certain factors are used in determining when children should be initiated into the formal reading program. In theory, differences among children are generally recognized by respondents to the questionnaire, but in actual practice chronological age is the main or sole criterion of readiness for formal reading used by at least 50 per cent. Practice is sadly lagging behind theory. Emphasis needs to be placed on the fact that no two children of equal chronological age are exactly alike and may differ in rate of growth, intellectual ability, backgrounds and experience. However, in spite of the foregoing statement it would seem that some attention is paid to auditory and visual perception abilities and use is made of readiness tests by approximately 60 per cent. More testing appears to be done in Manitoba as a measure of readiness for formal reading than one would have anticipated. A closer analysis of the questionnaire in terms of the areas they represent would clarify the picture.

Discrepancies in the above statements should be noted. In order to clarify some of these findings it would be necessary to interview many of the respondents and observe actual practice in classrooms.

Beginning Reading

Reading generally is begun on entrance to the first grade at six years of age regardless of intellectual, social, emotional and environmental differences among children.

A trend in thinking today which has support in research findings is that chronological age is not as important as the kind of program which is offered. Other criteria must be used in judging readiness for formal reading instruction, or administrative arrangements must be made that will allow teachers to differentiate instruction within the classroom. A major objective of the first few days in school should be to identify those children who are ready for a formal program and to plan for those who need pre-reading activities.

Readiness is sometimes defined as a time when the child is ready to read. Many kinds of abilities are needed. A child may be mature in some abilities but retarded in others. Initial progress depends on how instruction is adjusted to the childs' strengths and weaknesses. Introduction into the reading program should be gradual and continued as long as is needed.

If we want a child to grow to his full physical capacity, we do not stretch him or force him but provide the food and nurture that will assist growth. Similarly, if we want him to grow to his full mental capacity, we shall not succeed if we force him or stretch him but only if we provide an environment that will foster his mental growth. In reading, if we try to make him learn at too early an age, we may only succeed in making him fear and dislike reading. However, if we first allow him to become familiar with the spoken language and wait until he is mature enough to understand the use of symbols and is sufficiently interested to put forth the needed effort then we shall succeed. [4]

Word Recognition

Word recognition is an essential component of the reading program and is developed in a number of ways: through picture clues, configuration, context, phonic analysis, structural analysis and through use of the dictionary. According to responses to the questionnaire 50 per cent of Manitoba teachers preferred to teach the consonant and vowel sounds along with the development of a sight vocabulary. 41.7% preferred to teach the sounds after mastery of a basic sight vocabulary. 95% of teachers reporting felt that phonic analysis was of major importance when used in conjunction with other techniques of word recognition. Over 75% stated they teach phonic analysis both formally and as suggested by the teacher's manual.

In part, perhaps because they have been bombarded by an abundance of phonic materials designed to supplant or supplement beginning reading instruction, and in part, because of constant criticism of present-day methods many teachers have hoped to improve their teaching of word recognition, by over-emphasizing phonics to the neglect of other techniques.

When used with other techniques, the Harvard study indicates phonic analysis is considered, by a large majority of administrative officers, as of major importance. This is not controversial. The controversy lies only in the manner in which it should be taught. The basal reader approach emphasizes phonics as one of several techniques used in word identification. The different sounding systems support phonics as the most effective way to attack a word. Fifty-nine of sixty-five school systems in the Austin-Morrison study supported the basal reader approach to reading instruction.

Comprehension and Interpretive Skills

Over 90% of teachers reporting in Grades I to IV gave considerable or moderate attention to developing word recognition through structural and phonic analysis and context. As might be expected, less attention was given to these skills in Grade V to VIII - only 18% spend considerable time in this area. Attention to word meaning and comprehension skills remains relatively constant throughout the grades.

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[4] Edna Mellor. Education Through Experience in the Infant School, Toronto: The Copp Clark Company, Limited.

At all levels teachers stressed "following directions" rather than those skills which are a part of critical thinking.

Research indicates that reasoning ability begins in children at about three years of age and by the time the child is in grade one he is able to find solutions to simple lifelike problems and from there on is able to develop his higher level critical thinking and reading skills.

Oral Reading

Oral reading has always been an important part of reading instruction. According to Harris, "Oral reading gives the teacher a quick and valid way to evaluate progress in important reading skills, particularly those of word recognition and phrasing, and to discover specific instructional needs; ... provides practice in oral communication for the reader, and in listening skills for the audience".[5]

According to the questionnaire returns a considerable amount of instructional time was devoted to oral reading. Even though the emphasis shifted somewhat in the upper grades, approximately half the schools reporting allocated a moderate amount of time to oral reading, even at the sixth grade level.

Materials of Reading Instruction

The materials for use in reading instruction have been for many years a subject of controversy. In Manitoba the Department of Education has authorized a single basal series of readers for use in the elementary schools. Responses from the questionnaire indicated that 90% of teachers base their reading instruction on a single reading series. There is some evidence that other materials such as supplementary series, phonic and reading skills workbooks, and to a much lesser extent assignments from required reading, audio visual aids and books in content areas are also used.

Examination of a sampling of the questionnaires revealed that many teachers seem to be unaware of the real purposes of basal texts and most often rely on the basal series as the sole tool of instruction. Although the manuals contain specific instructions for the use of a wide variety of other materials, few make regular use of supplementary materials other than skills workbooks, particularly phonic workbooks. Workbooks are intended to reinforce skills already taught, to provide extra practice for those who need it, and to be used as a means of immediately clearing up misunderstandings related to skill instruction. It is important that workbooks be used in appropriate ways.

There appears to be limited awareness of the many varieties of materials and approaches related to the teaching of reading.

The response to the question about single versus multiple authorization of basal reading series was overwhelmingly in favor of multiple authorization.

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[5] Harris, Albert J. How to Increase Reading Ability, 4th Edition
New York: Longmans Green and Company, 1961 p.p. 92-93.

Comments on one basal series or multiple authorization show that some favor a single series because of difficulties created by pupil transfer, but also stress that there are many good series and that the teacher must use imagination in answering individual differences. Those who favor multiple series see this an an answer to individual differences in reading ability levels. Reading clinicians recommend several basal reading series plus freedom of teachers to choose their own materials.

Part B

INDIVIDUAL DIFFERENCES, SPECIAL SERVICES AND LIBRARY FACILITIES

Provision for Individual Differences

The basic question raised in this section of the questionnaire was: By what means are you grouping children so as to adjust the program of reading instruction to the wide range of differences found among children?

Twenty per cent of the respondents reported homogeneous class groupings, i. e. putting children of similar reading achievement together in one classroom.

Within the classroom, group instruction by reading ability with some provision for individual instruction received the largest (45%) percentage of responses as the predominant or exclusive practice.

Completely individualized instruction is almost never used.

Seventeen per cent reported that group instruction based on reading interests is the predominant or exclusive practice in their classrooms.

However, responses about grouping for instruction within the classroom may be subject to some questioning. There were 924 responses which indicated exclusive or predominant use of some methods of organization. As this number far exceeds the number of respondents there appears to be some duplication of response. An examination of 14 questionnaires available for closer scrutiny revealed that 5 responded to this question by marking 2 or more practices as exclusively or predominantly used. The items which tended to be combined were grouping for instruction based on interests, grouping for instruction based on ability and small group instruction based on specific needs. From this sample it appears that items c, d, and e might be combined as the predominant practice of the majority of teachers, i. e. children are grouped for instruction on the basis of interest and ability with some regrouping according to specific needs.

The varieties of grouping for instruction reported tend to be greater than expected and also greater than those reported in the Austin Morrison study. However, in Manitoba as in the school systems studied by Austin and Morrison, group instruction based on reading ability appears to be the main method of adapting the program to the differing instructional needs of children.

As one of the most serious difficulties in adapting classroom instruction to individual differences is the provision of suitable materials for instruction, teachers were asked what adjustment in materials was used for the various groups. A third of the respondents indicated that they used materials at the child's level of reading ability. Sixty-five per cent used the materials designated for the grade level; approximately two-thirds of these supplemented the materials with special exercises.

Examination of the small sample of questionnaires available once more indicated duplication of response with several respondents marking all three items. However, it seems clear that most teachers use the materials designated for the grade level plus special exercises.

Adjustments in the reading program can be made in three ways:
1. by providing materials which are difficult enough to challenge the child but not so difficult as to be beyond his ability to read with satisfaction and success;
2. by adjusting the rate with which he progresses through the material; or
3. by providing extra practice materials in the skills he is being taught. The most frequent adjustment reported (44%) appears to be in the rate of progress through the materials. The small sample results indicate that some adjustment is made in all three ways (difficulty of the material, rate of progress and practice of skills.)

One of the basic requirements of flexibility in reading programs is the facility with which children may be moved from one group to another during the school year. Responses indicate that only 32% of teachers feel that provision is frequently made for change of grouping although most teachers would agree that there is some possibility of change in group.

The questions focusing on provisions in the reading program for individual differences found in children seem to show that although there is some recognition of individual differences and some attempt to adapt instruction to meet these differences, most teachers cling to the concept that they are teachers of a particular grade and are, therefore, compelled to teach the skills and to use the materials considered suitable for that grade, irrespective of differences that may exist among the children they teach. The most common practice in attempting flexibility of instruction appears to be in rate of progress through the materials and in the use of additional practice exercises.

Various organizational procedures have been advocated to provide more adequately for children of differing capacities. One such recommended by many authorities in curriculum development, is the non-graded school "designed to implement a theory of continuous progress: since the differences among children are great and since these differences cannot be substantially modified, school structure must facilitate the continuous educational progress of each pupil". [6]

Individualized reading has also been advocated as a means for providing for differences among children. Its proponents claim that the child will

(1) progress more rapidly because he will not be hindered by group instructional techniques and because the program will be "tailored" to his specific needs,

(2) strive more diligently for self-improvement and avoid possible personal frustrations because his efforts will not be compared directly with those of others, and

(3) read more extensively because he himself is allowed to choose from a wide range of materials. [7]

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[6] John Goodland and Robert H. Anderson. The Non-Graded Elementary School New York: Harcourt Brace and Company, 1959, p. 52.

[7] Mary C. Austin and Coleman Morrison. The First R New York: The Macmillan Company 1963, p. 87.

Programmed Instruction is a recent development aimed at adjusting instruction to individual differences.

> The chief characteristic of these programs is the reduction into small, discrete steps of the subject matter or skill to be learned ... Learning occurs as the individual responds to each of the sequential steps in the program. These programs are so designed that (1) the learner can progress through the steps at his own rate and (2) the confirmation or correction of a response to a step provides immediate reinforcement. [8]

An attempt was made in this questionnaire to sample teacher opinion on the desirability of trying any of these approaches.

(a) Non-graded school -- Opinion was approximately equally divided on the desirability of trying a non-graded elementary school form of organization (49% were in favor, 51% against). Many respondents expressed the advantage of pupils progressing at their own level of ability, e. g. one comment recognized this type of organization as a way to avoid the stigma of failing. However, there was evidence of some confusion of the term "non-graded" with the "ungraded" classes found in Manitoba for the education of the mentally retarded.

(b) Individualized Instruction -- Very few of the teachers (17%) responding to this item were in favor of trying individualized reading. It was recognized by many as desirable but was not considered feasible. Comments such as "not practical" or "lack of time would make this program impossible" tend to express the feelings of most respondents.

(c) Programmed Instruction -- Despite the fact that very few complete programs in reading are available for use in programmed instruction, a large number of teachers (82%) would like to see this method tried.

It would appear that instructional procedures which make greater demands on teacher knowledge of reading and organizational abilities are feared by teachers, whereas programs which would be highly structured and would organize instruction into discrete sequential steps, and would therefore make fewer demands on the teachers' ability, tend to be looked on more favorably.

Special Programs for the Gifted

Much concern has been expressed in recent years as to whether the schools are providing a challenging program for gifted children. Therefore, an item was included in the questionnaire on the availability of special programs in reading for gifted children. Approximately 30% of the teachers indicated that such programs existed. Only one-quarter of these were special classrooms such as the major work classes in Greater Winnipeg. Most were enriched programs within the classroom which consisted of the use of more difficult reading materials, reference reading in content subjects, and extra reading when the children have finished regular assignments.

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[8] Ibid - page 94.

There seem to be few planned programs to challenge the gifted student in Manitoba schools outside the planned programs of Metropolitan Winnipeg.

Special Programs for the Disabled Reader

A second group of children who require special services in reading are those called "non-readers" or "under achieving" readers. These terms refer to children who are either completely unable to read even the easiest material and those whose achievement in reading is considerably below expectation in terms of their intellectual ability.

Of 571 teachers responding to this question, 343 (60%) indicated that special services were available for such children. Approximately half of these teachers claimed that diagnostic services were available. Remedial instruction by persons outside the classroom is reported with approximately equal frequency as is instruction by the classroom teacher. In view of the shortage in Manitoba of personnel trained in the diagnosis and remediation of reading problems, such responses are questionable. Further exploration of this area is essential if a true picture of teaching practices for the disabled reader is to be known.

School Librarian

School libraries are considered by educators to be an essential component of the reading program. Therefore, questions were included on the extent of libraries in Manitoba.

Virtually all schools (99%) have libraries of some description. Sixty-five per cent of these are classroom libraries - 34% have either central libraries or some combination of central and classroom libraries.

However, very few (11%) central libraries have the services of a librarian even part time. By far the largest proportion of central libraries are manned by classroom teachers (60%) and a sizeable number are looked after by students (26%). The remainder were served by parent groups. These findings point up the already known facts about the inadequacy of libraries and trained personnel to administer them.

Part C

EVALUATING, RECORDING AND REPORTING

1. Evaluation

An essential part of the elementary school reading program is the evaluation of instruction. Whether this function is performed by one or more persons in a school, there are several practices which may be employed in accomplishing this evaluative task. Respondents were asked to rate these practices according to their importance and frequency of use. Answers indicate that classroom visits, individual conferences with teachers, and studying and interpreting reading test results in that order are the three means of evaluating a reading program considered most important by the respondents. The answers in the Frequency Chart, however, were so erratic and so varied that the only observation which can be made is that such evaluation is a haphazard thing at best.

One method of evaluation is the use of standardized tests. Therefore, respondents were asked to indicate the types of tests and grades at which these were administered most often to the majority of the children in the school. A remarkably widespread use of standardized tests of intelligence, of reading readiness, and of silent reading is reported, particularly in the primary grades. Standardized tests of oral reading are used with considerably less frequency.

Informal teacher-constructed tests are also an important phase of evaluation, and therefore, teachers were asked to give their opinions on the importance of these, and the frequency of their use in evaluating pupil progress. Virtually all teachers regard these to be of considerable importance. Approximately 60% indicate a monthly or more frequent use of this type of test.

The third type of evaluation is observation of a child's daily performance. Ninety-nine per cent consider the daily reading lesson of major or moderate importance in evaluating reading progress. Similarly, 92.6% indicate that workbooks are very important in evaluation.

Readiness for successful experiences in the beginning stage of reading instruction can be evaluated by a number of techniques - informal observation, formal testing, the readiness program of a basal reading series, and kindergarten records. Teachers were asked for their opinion as to the importance of these in determining a child's readiness to read in Grade One. The technique felt to be of major importance by 64% of respondents was the readiness program of a basal reading series; informal observation was ranked second in major importance.

Clear responsibility for both frequency and type of testing rests with the classroom teacher.

Perhaps of greater importance than which tests were administered, or when, is the use made of the information gained from them. Tests may be given for various purposes, and accordingly the use made of them may also vary. One authority has listed the following purposes for testing:

- Understanding of individual pupils -- their ability, needs, and growth.
- Identifying special types or groups such as talented pupils, slow learners, under-achievers, pupils in need of remedial work, or those who have plans which are not in line with their potential.
- Comparing an individual with others in a specified group.
- Diagnosing individuals and groups -- identifying strengths through weaknesses.
- Measuring growth from year to year for an individual or a group.
- Studying school standards and efficiency of instruction.
- Planning of curriculum, including identifying those aspects of the curriculum needing special emphasis or being unduly stressed.
- Providing students with information about themselves to help them in planning and achieving appropriate vocational goals.
- Placing a pupil in an appropriate school class or group.
- Planning and adapting instruction to level of ability and to learning needs of members of the class.
- Evaluating pupil achievement, growth, and readiness for more advanced instruction. [9]

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[9] Stoughton, Robert W. The Testing Service: A Design for Program Development, Hartford, Connecticut: State Department of Education, 1959, p. 20.

In Manitoba schools, in order of importance, tests are considered important for: (1) selection of children for remedial teaching (2) promotion (3) selection of reading materials (4) evaluation of teaching methods (5) evaluation of teacher effectiveness (6) evaluation of school effectiveness.

74.9% of schools have not used evaluation of achievement testing as a subject for in-service training in the past five years.

An item analysis of achievement tests is useful in providing diagnostic clues to pupils' instructional needs. Very few teachers report that they use test results in this way regularly. Although test results appear not to be used to adapt reading instruction to pupil ability, teachers regard achievement in reading as a major criterion for promotion. Contrary to modern educational thought, the main way used to help poor readers is to have them repeat the grade.

2. Reporting to Parents

The reporting of pupil progress is the most common means of communication between the school and the home. Pupil progress may be reported by use of report cards, parent-teacher conferences, or a combination of these.

In Manitoba,report cards are universally used for informing parents of pupil progress in reading. The use of a number (%) grade is disappearing in favor of letter grades and a written comment. It is encouraging to note that one-fourth of all teachers have regularly scheduled conferences with parents.

Very little interpretation of the reading program, its goals, methods and materials of instruction, is given to the parent. One-sixth of the respondents report that Home and School Associations deal regularly with Reading.

There would appear however, to be an increasing use of personal interviews since 20% report using this method regularly to inform parents about reading.

Part D

PROFESSIONAL GROWTH OF TEACHERS

The training of elementary teachers is crucial to their success in introducing their pupils to the skills of reading. Therefore, the questionnaire included sections on the pre-service and in-service training of teachers in reading.

The first Harvard-Carnegie reading study was initiated to determine how well the prospective teacher of reading is being prepared. A report of the findings revealed, among other things, that (1) three per cent of the colleges and universities do not require prospective elementary school teachers to enroll in any course work devoted to the teaching of reading as a requirement for graduation, (2) when reading is taught with other related subjects in a single course (for example, language arts), as is done in 50 per cent of the colleges, actual class hours devoted to reading average only eight, (3) when time is a factor, intermediate grade study skills will usually be omitted from the course or, if included, will be treated so cursorily as to be of little benefit to the prospective intermediate grade teacher, (4) little preparation is offered that will help beginning teachers to recognize, diagnose, or treat reading difficulties, and (5) little, if any, guidance is offered in reading research.[10]

The respondents whose replies were considered in the area of pre-service training in Manitoba were those involved with teacher-training as instructors, or as trainees in the five years prior to the administration of the questionnaire.

A training course in reading is reported as required by 97% of those replying. Three per cent report a language arts course as required with reading as a major part of the program.

A review of courses offered by Manitoba Teachers' College and Brandon College shows that the teaching of reading must be incorporated in courses entitled Primary Methods or English Methods since no course in Reading was listed (1963-64). Many students have been required to take a remedial reading course to improve their own reading level and this may have caused confusion for some respondents.

An examination of course content to discover which skills were discussed shows that over 90% report they received training in word recognition skills and the skills to be developed at the primary level. Twenty per cent report training in intermediate reading skills while even fewer received training in diagnostic or remedial techniques.

Respondents were asked to express their opinions as to the attention given to the various aspects of the reading program in their teacher-training period. Forty-two per cent report little emphasis on ways of differentiating reading instruction to meet individual needs. Forty-five per cent report very little emphasis on ways of varying assignments to suit individual needs.

While approximately 35% of the respondents felt they had received thorough training in principles of structural and phonic analysis, a considerably smaller proportion reported complete satisfaction with the training in other areas of the program. Greatest dissatisfaction was expressed with training in differentiating instruction to meet individual needs and in ways of varying assignments to suit individual needs.

The majority of teacher-trainees reported that the practice-teaching period presently offered is too short. They would prefer to observe many levels of teaching ability rather than superior teaching only.

In-Service Training

Scattered replies by a limited number of respondents to the questions on in-service training during the past five years reveal that attempts to encourage professional growth of teachers have been sporadic at best. Many who reported having attended reading courses within the past five years indicated that these had been one or two day workshops provided by publishers. It is quite evident that, partly due to the paucity of reading courses offered within Manitoba, very few of those responding to the questionnaire had valid or extensive training in the teaching of reading. Planning for the limited type of training which has occurred has not taken place within the school, but has been left mainly to the inspectors or to the Manitoba Teachers' Society.

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[10] Austin, Mary C.; Morrison, Coleman; et al. The Torch Lighters Tomorrow's Teachers of Reading. Cambridge: Harvard Graduate School of Education, 1961, passim.

Part E

ROLE OF THE ADMINISTRATOR

When considering current reading practices, it is important to include a survey of those persons within a school organization who assume responsibility for the reading program. Therefore respondents were asked to indicate those participants who should assume major responsibility, and/or should take part in decision-making in the various phases of the reading program.

The chief participants in making decisions regarding a reading program are recognized as the classroom teacher, principal, supervisor, and inspector.

According to the replies, the principal has no major responsibility in developing goals for the program, little importance in its implementation or appraisal, selection of materials, or in provision of diagnostic instruction.

The superintendent's only major responsibility in the direction of a reading program is recognized as recruitment of teaching staff.

In the selection of reading materials, no one between the Director of Curricula and the classroom teacher is given major responsibility for choosing materials.

While classroom teachers are not given major responsibility for supervision in all schools, they are expected by a majority of respondents to participate in this activity on an equal footing with the supervisors.

Major responsibility for supervision of individual school programs is delegated to the principal in 53.5% of replies. The inspector and supervisor also are expected to assume this responsibility for supervision and development of the reading program.

There is evident misunderstanding of the term "reading specialist" since these are given major responsibility for developing goals and for providing diagnostic testing. It is possible that for some the term referred to authorities in the field of reading, while for others this term meant a possible staff member specially trained.

Professional Reading

Very few teachers have available to them in their schools the professional journals concerned with reading and language development at any level. This means of individual professional growth is consequently not used. Among those who do have them available, a very small number read them regularly.

CHAPTER III - DISCUSSION AND RECOMMENDATIONS

The preceding section presented the findings of the questionnaire. Several references to discrepancies in responses have been noted from time to time. This was felt by the committee to be one of the serious limitations of this study. It would have been necessary to conduct interviews and to make classroom visits in order to clarify some of these findings.

To conduct a study or analysis of the findings on the scale necessary for a complete examination of the state of reading in Manitoba would have required full time employment of an extended group of research staff.

It is therefore recommended that this report be supplemented by a field study to include personal interviews with teachers and administrative staff and the observation of classroom practices to determine the present situation in the province.

Recommendations

Arising from the findings of this questionnaire and modern educational thought, the committee submits the following recommendations:

Part A - Components of the Reading Program

1. That the establishment of kindergartens be encouraged; that appropriate reading activities be initiated for those who appear to be ready to begin reading, and that the kindergarten program be adjusted according to each child's strengths and weaknesses as revealed by an appraisal of readiness.
2. That chronological age be considered as only one of the factors to be examined when looking at readiness for reading and that others, including mental, physical and social maturity, be considered.
3. That no single method of instruction in beginning reading be advocated but that a variety of approaches be permitted in order that children may benefit from a program geared to their particular needs.
4. That emphasis be placed on helping children to develop proficiency in word recognition through the use of meaning clues, visual analysis of word forms, various sounding approaches, and the dictionary.
5. That throughout the grades, elementary and secondary, emphasis be placed on getting meaning from the printed page, and that recognition be given to the fact that word calling will not necessarily ensure meaning.
6. That a definite program be initiated in which all children are taught reading and study skills appropriate to their developmental level, and that teachers be encouraged to stimulate thinking beyond the literal facts of the passages read.
7. That oral reading be used, not only as a means of evaluation, but also as a means of developing communicative and listening skills.
8. (a) That the basal readers be used in conjunction with other reading materials such as storybooks, reference books, newspapers, magazines, and audio-visual aids.
   (b) That the information contained in manuals be regarded as suggestive, not prescriptive, and that teachers be encouraged to be creative in the adaptation of materials and procedures for classroom use.
   (c) That teachers be instructed in the appropriate use of workbooks as one instructional tool.
   (d) That teachers be encouraged to examine new materials and study new approaches which might help them do a better teaching job.

Part B - Individual Differences, Special Services, Library Facilities

Individual Differences

1. That materials of different reading levels (including basal readers) be available in each classroom in order that adjustments may be made for those who are achieving either above or below grade placement.
2. That, in addition to grouping for instruction on the basis of reading ability, teachers be encouraged to use different methods of grouping depending upon the purpose and nature of the activity. e.g. some whole group instruction for listening or enjoyment of a story; and small groups formed for special instructional needs.
3. That, in order to provide some time for teacher preparation and attention to individual needs, consideration be given to employment of teacher-aides to relieve the teacher of the many clerical tasks she is required to perform.
4. That present policies of classifying children on a graded basis be re-examined and that other methods of school organization be considered which will permit each child to progress through the elementary school curriculum in a way best suited to his abilities.
5. That consideration be given to the establishment of resource centres within the province which would provide supplementary materials to enable the teacher to adapt instruction to the needs of the children.

Special Services

1. That a curriculum be designed to stimulate and challenge superior readers.
2. That teachers be encouraged to identify both gifted and disabled readers as early as possible in the primary level.
3. That every school have access to the services of a well-trained and well-equipped reading centre to which children with reading disabilities can be referred for diagnostic and corrective help.

Library Facilities

1. That library grants be increased in order that an adequate central library may be established in every elementary school, and that as soon as possible, the services of full-time qualified librarians be made available in the school.

Part C - Evaluation, Recording and Reporting Progress

Evaluation

1. That evaluation of reading progress be a continuous and cumulative activity based in large measure on each child's daily performance.
2. That teachers be instructed in the interpretation of test results, and encouraged to analyze these results in order to determine instructional needs.

3. That cumulative record forms be provided so that a continuous and comprehensive record of every child's reading abilities, habits and interests may be kept and reappraised throughout his school career.

4. That in reporting school progress, teachers be encouraged to supplement written reports with parent-teacher conferences. This would ensure better understanding of a child's progress according to his ability.

5. That the Department of Education encourage school districts and divisions to establish a public relations program for the purpose of informing the public of reading policies and procedures, and to inform parents of their role in developing reading competency and interest.

Part D - Professional Growth of Teachers

Teacher-Training

1. That each prospective teacher be required to take basic courses in reading in order to become thoroughly acquainted with the essential components of the reading program, and with the practical application of theory in meaningful situations. These courses should include
   (a) a survey course in developmental reading;
   (b) a course in diagnostic and remedial techniques;
   (c) a course in children's literature.

2. That in-service programs be designed to increase the knowledge and performance of teachers within the school.

3. That such programs be continued from year to year, and that teachers play an active role in planning program content.

4. That released time for in-service programs be provided.

5. That, as soon as possible, qualified reading consultants be appointed to assist classroom teachers with reading programs and to provide leadership for in-service activities in each region of the province, and that a director be appointed by the Department of Education to co-ordinate these services.

6. That the University of Manitoba be requested to provide courses which would lead to a specialist certification in reading.

Part E - Role of the Administrator

1. That the functions of school personnel be clearly defined in relation to the reading program so that closer communication and co-operation may be achieved.

2. That whenever possible, candidates for principalship of elementary schools be required to have extensive knowledge and experience of the elementary school curriculum and administration. Further, that they be required to assume responsibility for their supervisory role of guiding teachers in the instruction of reading.

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7 (Same as number 1 above)

8 Ibid

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SUMMARY OF QUESTIONNAIRE

Replies were received from 780 respondents. Of these 24 were student teachers. Thirty-seven replies were received after tabulation was completed, and are not included in figures, although the comments were considered.

Forty-four divisions are represented.

Years of experience - see Table 5.

Grades taught or supervised - see Table 6.

Certificates - see Table 7.

Seventy-seven per cent of teaching staff reporting held 1st B or better certification.

Positions - see Table 3. (page 51 of this Report)

Courses taken - 34.3% report having taken reading courses during the past five years. Many of these were conferences or workshops presented by publishers.

Part A - Components of the Reading Program

1. 62.9% of respondents consider "understanding and dealing with the meaning intended in the passage" of first importance.

2. 32.2% consider recall, reasoning, evaluation, etc., of first importance. These proportions may be influenced by the number of replies at elementary and secondary levels.

3c. 57.9% of 438 respondents feel that early achievement in reading influences later achievement and attitude.

4a. 92.1% admit children to first grade exclusively on the basis of specific chronological age. Of these 57.1% use December 31 as a cut off date.

Table 5

Years of experience in teaching or supervision of respondents		
Nil	24	3.4%
0 - 5 years	134	19.5
5 - 10 years	117	17.0
10 - 20 years	215	31.2
More than 20	197	28.9
	687	

NOTE: The numbering of the various sections in this summary corresponds to that of the original questionnaire.

Table 6

Grades taught or supervised by respondents	
K-3	VII - 37
I-131	VIII - 49
II-98	IX - 14
III-90	X - 9
IV-55	XI - 11
V-54	XII - 6
VI-53	Multi-graded 96

Table 7

Certification of Respondents			
(Nos. only)	Permits	-	1
	L. of A.	-	0
	1st	-	90
	2nd	-	40
	3rd	-	0
	1st A	-	163
	1st B	-	154
	Collegiate	-	123
			571

2. Kindergarten

1.	No. reporting kindergarten	176
	(a) No. reporting private kindergartens	74
2.	Continuous reading beyond readiness	26
	(a) Reasons for no post-readiness	
	Philosophy	76
	Personnel	77
	Time	15
	(b) Program presented to whole class	4
	to those indicating readiness	7
	(c) Materials used in post-readiness:	
	experience charts	
	charts and flannel boards	
	teacher-devised worksheets	
	workbooks	
3.	No. supporting early teaching of reading	254
	No. opposed to early teaching of reading	184

4. Entrance to school based on chronological age

Yes 565 No 48

Cut-off dates:
Six years of age on or before:
September 30 - 6
October 31 - 5
November 30 - 244
December 31 - 320
January 31 - 5

5. Table 8

Factors in determining reading readiness

	Always	Often	Occasionally	Never
a. Mental maturity determined by psychological measurement	6.9%	12.8%	36.5%	43.8%
b. evidence regarding auditory and visual perceptual abilities	42.2	13.6	28.8	15.4
c. evidence pertaining to physical condition	15.2	16.6	32.7	35.5
d. judgment of linguistic ability	14.4	31.5	32.4	21.7
e. informal appraisal of emotional and social maturity	14.6	31.4	35.5	18.5
f. reading readiness tests	42.8	18.5	19.6	19.1
g. interest in reading	20.9	35.0	25.2	18.9
h. chronological age	48.7	11.3	4.4	35.5

5. (i) Additional factors mentioned as a means of determining readiness by a small number of respondents

(1) Basic Reading Program - "Before We Read"

(2) Cultural background, maturity

(3) Pressure from parents.

6. (a)

Table 9

READING INSTRUCTION TIME

	No. Re-porting	0%	% of	time					
			5	10	25	50	75	90	100
a. Basal Reading Series	345	0	.8	2.6	7.53	33.6	38.5	11.6	5.4
b. Supplementary Series	396	18.4	6.8	47.7	25.5	1.6	-	-	-
c. Teacher devised materials	365	9.8	23.2	45.5	18.6	2.7	-	-	-
d. Experience stories and/or charts	326	24.8	37.7	32.8	4.7	-	-	-	-
e. Trade Books (story books)	319	36.9	32.9	25.3	4.9	-	-	-	-
f. Others (used very sparsely) Word Study Games Workbooks Phonic Games Films									

6. (b) Supplementary Series Used
(Listed in answer to p. 7 item 6 b)

Series	Used by
Ginn Basic Series	57
Ginn Enrichment Series	12
Winston Basic Series	31
Betts Basic Readers	14
Gage - Curriculum Foundation Basic	67
Social Studies	17
Health and Personal Development	34
Health and Safety	1
Macmillan - Gates Series	9
Nelson - McKee Reading Series	7
Reading for Meaning	10
Ryerson - Bond Developmental Series	8
Woodland Frolics Series	1
Allyn & Bacon - Sheldon Basic Reading Series	9
Clark, Irwin - Laidlaw Basic Readers	3
Jack Hood - Cowboy Sam Series	1
Copp-Clark - Alice & Jerry Series	44
Lyons & Carnahan - Reading for Independence	64
Follett - Beginning to Read	1
Beacon Readers	1
Skill Text Readers	9

7. Phonics and Phonic Analysis

In the beginning reading program, children are helped to identify names, sounds and forms of letters:

		%
prior to teaching whole words	31	6.4
simultaneously with teaching whole words	245	50.8
after teaching whole words	201	41.6
not at all	5	1.0
	482	respondents

8. Table 10

Current practices in teaching phonics analysis

		%
a) Taught separately	31	5.6
b) Taught as suggested by B. R. manual	91	16.6
c) Combination (a) and (b)	420	76.9
d) Incidentally	4	.6
e) Not at all	0	
	546 respondents	

9. and 10. Table 11

Importance of phonic analysis

Measure of Importance	(a) Used in isolation %	(b) Used in conjunction with other techniques
Major	22.9	54.5
Considerable	33.7	40.3
Moderate	30.0	4.9
Little	12.0	.3
No	1.4	0

11. Extent to which reading instruction is based on different methods

Table 12

Grade Level: I - III

Method	No. Reporting	Always	Frequently	Seldom	Never
a) single basal series	299	74.9	15.7	4.3	5.1
b) several basal series	286	23.4	41.9	16.7	19.0
c) self selection	253	5.9	56.1	20.5	17.5
d) assignments from req'd. reading	208	14.9	27.4	19.7	38
e) audio visual aids	233	13.3	45.9	19.3	-
f) phonics workbooks	337	51.3	31.7	6.2	-
g) mechanical devices	178	6.8	24.1	21.3	-
h) programmed instruction	139	2.1	4.3	14.3	-
i) anthologies of literature	151	1.9	23.8	34.4	-
j) books in content areas	170	10	49.4	18.8	-
k) reading skills workbooks	264	69.2	21.9	4.1	-
l) magazines & newspapers	185	3.2	22.7	38.9	-

Grade Level IV - VI

Method	No. Reporting	Always	Frequently	Seldom	Never
a) single basal series	106	67.9	23.5	1.9	6.7
b) several basal series	84	5.9	21.4	42.8	29.9
c) self selection	107	10.2	49.5	29.9	10.4
d) assignments from req'd. reading	95	17.8	38.9	29.4	13.9
e) audio visual aids	76	0	32.8	38.1	-
f) phonics workbooks	96	13.5	31.2	28.1	-
g) mechanical devices	74	4.0	9.4	27.0	-
h) programmed instruction	74	4.0	9.4	27.0	-
i) anthologies of literature	84	2.3	26.1	41.6	-
j) books in content areas	100	11.1	65.	17.	-
k) reading skills workbooks	128	55.5	35.9	5.4	-
l) magazines & newspapers	111	4.5	37.9	44.1	-
Grade Level VII - XII					
a) single basal series	32	62.5	1.8	3.1	32.6
b) several basal series	29	10.3	34.4	31.0	24.3
c) self selection	37	13.5	51.3	24.3	4.9
d) assignments from req'd. reading	43	18.6	37.2	30.2	14
e) audio visual aids	36	.05	36.1	30.5	-
f) phonics workbooks	30	16.6	36.6	6.6	-
g) mechanical devices	30	3.3	16.6	36.6	-
h) programmed instruction	31	6.4	22.5	9.6	-
i) anthologies of literature	36	11.1	22.2	36.1	-
j) books in content areas	31	12.9	41.9	32.2	-
k) reading skills workbooks	35	40	25.7	22.8	-
l) magazines & newspapers	53	3.7	47.1	30.1	-
More than 4 Grades					
a) single basal series	95	74.7	14.7	3.1	7.5
b) several basal series	62	12.9	29.0	32.2	25.9
c) self selection	80	11.2	46.2	30	12.6
d) assignments from req'd. reading	65	13.9	30.7	30.7	24.7
e) audio visual aids	59	.08	48.9	42.8	-
f) phonics workbooks	50	32	46	10	-
g) mechanical devices	54	7.4	18.5	35.1	-
h) programmed instruction	68	1.4	7.3	22.0	-
i) anthologies of literature	51	0	7.8	49.0	-
j) books in content areas	38	5.2	44.7	39.4	-
k) reading skills workbooks	88	59.0	32.9	5.6	-
l) magazines & newspapers	65	12.3	23.0	49.2	-

Table 13

12. Degree of Instructional Reading Given to Skills

Grades 1 and 2 Skill	No. Reporting	Considerable	Moderate	Little	No
a) developing word recognition through structural analysis, phonic context	406	84.2	13.3	1.7	.8
b) developing word meaning	404	40.0	44.3	14.3	1.4
c) grasping general meaning	403	51.3	37.4	10.6	.7
d) interpreting facts accurately	397	44.0	41.0	12.5	2.5
e) identifying the sequence of ideas and events	400	31.5	48	19	1.5
f) reaching a conclusion or generalization	392	22.7	38.7	35.4	3.2
g) following directions	407	70.2	23.8	5.6	.4
Grades 3 and 4					
a) developing word recognition through structural analysis, phonic context	291	53.5	41.2	4.4	-
b) developing word meaning	298	53.0	43.2	3.6	-
c) grasping general meaning	293	53.5	40.2	5.7	-
d) interpreting facts accurately	295	42.0	51.1	7.1	-
e) identifying the sequence of ideas and events	280	30	50.7	19.2	-
f) reaching a conclusion or generalization	349	19.7	43.2	36.1	-
g) following directions	290	68.6	28.2	3.2	-
Grades 5 and 6					
a) developing word recognition through structural analysis, phonic context	203	15.2	49.2	33.4	-
b) developing word meaning	230	57.8	36.5	5.2	-
c) grasping general meaning	231	54.9	38.5	6.6	-
d) interpreting facts accurately	230	56.9	36.5	6.6	-
e) identifying the sequence of ideas and events	229	40.1	43.2	15.2	-
f) reaching a conclusion or generalization	227	42.4	46.2	11.4	-
g) following directions	222	62.1	31.5	6.4	-

Grades 7 and 8

Skill	No. Reporting	Considerable	Moderate	Little	No
a) developing word recognition through structural analysis, phonic context	132	3.0	25	52.2	19.8
b) developing word meaning	135	39.2	45.9	11.8	-
c) grasping general meaning	134	47.0	41.0	12	-
d) interpreting facts accurately	136	47.7	38.9	13.4	-
e) identifying the sequence of ideas and events	135	33.3	34.8	28.1	-
f) reaching a conclusion or generalization	135	48.8	34.8	16.4	-
g) following directions	132	54.0	29.6	11.8	-

As expected there is a general shift in emphasis on various skills as students progress through the grades, but at all levels teachers stress "following directions" rather than those skills which are part of critical thinking.

19. Series in order of Preferences

First Choice	-	1. Ginn Reading Series
		2. Gage Curriculum Foundation Series
		3. Copp Clark (Can. Dev. Rdg.) Series
		4. Copp Clark Alice & Jerry
		5. Phonetic Keys to Reading (books not series)
Second Choice	-	1. Ginn Series
		2. Sheldon Series
		3. Gage Curriculum Foundation Series
		4. Alice & Jerry Series
		5. Reading for Meaning Series
Third Choice	-	1. Ginn Series
		2. Gage Curriculum Series
		3. Sheldon
		4. Winston
		5. Betts Basic Readers
Fourth Choice	-	1. Canadian Basic Readers
		2. Reading for Meaning
		3. Ginn Basic Series
		4. Sheldon Series
		5. Alice & Jerry Series
Most Popular Series	-	1. Ginn Basic
		2. Gage Basic Curriculum Foundation
		3. Alice & Jerry - Copp Clark
		4. Sheldon Basic Series
		5. Reading for Meaning

N. B. Certain of these series were of recent origin in 1964 and were clearly little known.

Part B - Individual Differences, Special Services, Library Facilities

1. Individual Differences

(a) class teacher responsible	586
(b) variations of school organization	25
	611 respondents

Table 14

2. Provision for Individual Differences

	Exclusive	Pre-dominant	Moderate	Infre-quent	Never
a) Ind. instruction (no group)	3	3	3	92	326
b) Ind. instruction (some group)	3	20	90	141	198
c) Group instruction based on reading interests	28	129	128	66	134
d) Group instruction based on reading ability	83	331	91	16	23
e) Small group for specific purposes	18	64	250	87	87
f) Homogeneous class instruction (reading interests)	11	42	95	120	177
g) Homogeneous class instruction (reading ability)	31	158	98	61	113

3. Materials Used in Group Instruction:

(a) at level of reading ability	229
(b) designated for grade	137
(c) designated for grade plus special exercises	297
	663 respondents

4. Adjustment of Materials to Children:

(a) difficulty	266
(b) rate of progress	378
(c) in practice of skills	242
	886 replies

Some respondents use combinations.

5. Flexibility in Group Instruction:

(a) frequently	147
(b) sometimes	254
(c) infrequently	32
(d) never	19
	452 respondents

6. Knowledge of, and desire for experimentation

	Yes	No
(a) Non-graded	110	117
(b) Individualized instruction	34	169
(c) Programmed instruction	200	44

7. Special services available for able or superior readers

	Yes	No
Within classroom	195	314
Outside classroom	54	298

8. (a) Special services available for non-reader or disabled

	Yes	No
Available	343	228

Table 15

8. (b) Type available for disabled	Non-Reader	Underachieving
Clinical diagnosis	149	173
Clinical treatment	94	117
Ind. instruction by special teacher	90	149
Group instruction by special teacher	55	111
Ind. instruction by class teacher	174	217
Group instruction by class teacher	97	157

Library Facilities

	Yes	No
9. Library facilities provided	613	3

9. (a) Types of Facilities

i) Individual classroom only	398
ii) Central only	19
iii) Combination (i) and (ii)	192

9. (b) Staff

Full time librarian	10
Part time librarian	14
Classroom teachers	126
Home & School	19
Students	56

9. (c) Use of library

i) Regular class visits	53
ii) Free use in school hours	48
iii) Combination (i) and (ii)	55

Table 16

Part C - Evaluation, Recording, Reporting Progress

		Major Importance	Moderate
1.	Classroom visits	54.4	26.9
	Individual conferences	34.4	41.8
	Studying & interpreting reading test results	42.8	39.8

There was little agreement as to the frequency of use of these techniques.

2.

Type of Test	Kinder.	1	2	3	4	5	6	7	8	9
a) Intelligence	12	122	124	128	120	92	92	84	60	31
b) Reading Readiness	76	223	57	45	11	7	5	10	3	6
c) Basic Rdg. Skills	4	287	253	251	84	88	82	20	12	9
d) Rdg. Achievement	1	124	125	180	129	117	115	34	23	10
e) Oral Rdg. Skills	1	75	71	73	46	43	31	8	5	1

3. (a) Informal Teacher-Constructed Tests

Type of Test	No. Reporting	Major	Moderate	Little	No
Oral Skills	371	33.6	56.6	7.0	
Silent Reading Skills	488	69.4	27.8	1.8	
Other			(sparse response)		

3. (b)

Type of Test	No. Reporting	Weekly	Monthly	Quarterly	1/2 Yearly	Not at All
Oral Skill	329	42.8	18.8	29.4	-	-
Silent Reading Skills	443	37.9	22.3	33.8	-	-

4.

Importance in Evaluating Reading Performance	No. Reporting	Major	Moderate	Little	No
Workbooks	559	44.0	48.6	6.2	
Daily Reading Lesson	569	80.1	19.6	.3	

5.

Reading Readiness at Grade I	No. reporting	Major	Moderate	Little	No
a) informal observation	404	54.4	38.6	6.6	
b) formal testing materials	377	38.1	51.9	6.1	
c) readiness prog. in basal readers	408	63.7	33.0	2.4	
d) kindergarten record	231	31.1	28.1	13.4	

6.

Clear responsibility for both frequency and type of testing rests with the classroom teacher.

7. Achievement tests have most significance when the teacher is allowed some selection of reading materials according to 88.6% of replies.

Table 17

8. Uses made of results of reading achievement tests:

Use	No. Reporting	Major	Moderate	Little	No
a) Promotion	465	37.2	52.0	7.9	
b) Remedial teaching	464	64.1	31.6	4.0	
c) Selection of reading materials	362	41.7	47.7	4.6	
d) Evaluation of teacher's effectiveness	404	17.0	45.7	20.0	
e) Evaluation of teaching methods	411	23.3	55.7	13.6	
f) Evaluation of school's effectiveness	352	11.6	45.4	31.8	

9.

74.9% of schools reporting have not used evaluation of achievement testing as a subject for in-service training in the past five years.

10. Achievement Test Analysis by teachers (425 reporting):

Regularly	19.0	Seldom	17.1
Occasionally	30.1	Never	33.8

11. Importance of reading ability in relation to promotion

Major	75.7%	Little	1.4
Moderate	22.2	No	.7

12. Provisions made for students who have not achieved minimum standards:

Repetition of grade	427
Remedial instruction	390
Special classes	156
Deceleration	125
Summer program	35

Many indicated more than one provision.

13. Reading progress indicated to parents by:

Letter grade	360
Grading plus comment	322
Number grade %	190
Letters S or U	33

14. and 15. Reports to Parents:

Method		Regularly	Occasionally	Seldom	Never
14.	Parent-teacher conference	25.6	53.9		
15a)	Home & School programs	16.2	49.3		
15b)	Demonstration teaching	Not significant			
15c)	A School Bulletin	Not significant			
15d)	Personal Interviews	19.6	57.1		21.2

Part D - Professional Growth of Teachers of Reading

1. 133 respondents. 97% took a course in reading during pre-training period.

Table 18

2. (a) Parts of Reading Course	No. Reporting	Major	Some	Incidental	None
Word recognition skills	124	45.9	47.5		
Skills of the primary grades	126	73.8	22.2		
Skills of Intermed. grades	123	19.5	58.5		
Diagnosis of rdg. difficulties	122	17.2	68.2		
Remedial techniques	121	13.2	61.9		
Research in reading	119	-	33.6	50.4	
Developmental aspects of rdg.	113	15.9	63.7		

2. (b) 3% had a course in language arts in which reading received a major part of the time.

Table 19

3. Instructional Emphasis given to:	No. Reporting	Thorough	Good	Very Little	None
a) Developing a child's vocabulary	127	22.8	62.9		
b) Knowledge of structural analysis of words	125	38	56.8		
c) Knowledge of phonic principles used in reading	126	38.0	50.7		
d) Were aware of specific skills of comprehension	124	18.5	62.9		
e) Knew how to form teaching groups	124	26.6	41.9	29.8	
f) Knew how to differentiate reading instruction to meet needs of different groups	124	12.0	41.9	42.7	
g) Knew how to make purposeful practice for skills taught	114	7.8	60.5	27.1	
h) Knew how to vary assignments etc.	125	11.2	38.4	45.6	
i) Were acquainted with philosophy & content of authorized texts	126	10.3	46.0	34.1	
j) Were aware of audio-visual instructional aids	116	18.9	56.8	21.5	
k) Were aware of professional books and materials	125	10.4	50.4	32	

4. a) Time spent in schools: Adequate 40% Too short 61.5%
b) Observing: superior teachers 9.7% All types 90.3%

II. - In-Service Professional Growth of Teachers

1. Answers here are not conclusive, but indications would seem to show workshops are held occasionally and are popular. Visits to other classrooms are held rarely, but might be a preferred activity.

2. a) Inspectors, principals, and classroom teachers are most often involved.

3. Activities are planned by: inspectors, principals, MTS, and teachers.

4. Questions sparsely answered.

Part E - Role of the Administrator

Table 20

Assumes Major Responsibility	Classroom Teacher 1	Principal 2	Supervisor Consultant 3	Superintendent or Assistant 4	Inspector 5	Sp. Ed. Director 6	Reading Specialist 7	Remedial Teacher 8	Director of Curricula 9
a) Dev. Goals & Obj.	138	30	64	30	11	12	68	2	101
b) Implementation of Rdg. Pro.	156	94	54	48	15	7	19	4	55
c) Appraisal of Rdg. Pro.	130	67	104	44	67	9	51	1	12
d) Recruitment of Personnel	14	33	49	151	41	34	7	0	28
e) Selection of material for classroom use	128	51	73	36	14	9	71	6	126
f) Supervision of Classroom teaching	58	245	82	25	116	2	7	2	0
g) Provision of Diag. Instruct.	122	44	47	35	14	13	57	56	9
h) Provision of Diagnostic Testing of Reading	62	76	68	39	25	9	77	25	7
i) Supervision of Rdg. Pro.									
1. Elem. school	27	48	117	56	100	22	22	0	18
2. Individual school	29	160	46	6	40	3	12	1	2
j) Interpretation to parents	174	146	33	29	19	7	21	1	4
Participants	1	2	3	4	5	6	7	8	9
a) Devel. Goals	246	211	155	53	129	39	99	79	33
b) Implementation of Rdg. Pro.	218	230	140	43	142	27	44	68	18
c) Appraisal of Rdg. Pro.	236	248	121	54	183	12	77	70	15
d) Recruitment	40	147	116	66	126	39	45	20	14
e) Selection of material for classroom use	225	201	150	52	97	46	105	92	68
f) Supervision of class teaching	24	169	150	79	202	13	44	17	1
g) Provision of Diag. Instruct.	148	147	95	28	68	19	73	97	11
h) Provision of Diag. Testing	190	154	93	29	67	15	48	74	5
i) Supervision of Rdg. Pro.									
1. Elem. School	90	130	87	44	111	15	40	12	7
2. Individual school	77	88	77	22	91	9	14	13	6
j) Interpretation to parents	191	166	95	38	69	7	29	25	5

Table 21

Assumes Major Responsibility	No. Reporting	Class Teacher 1	Principal 2	Supervisor 3	Superintendent 4	Inspector 5	Sp. Ed. Director 6	Reading Specialist 7	Remedial Teacher 8	Director of Curricula 9
a) Development of goals	456	30.2		14.0				14.9		22.1
b) Implementation of Rd. Pro.	502	41.0	18.7							
c) Appraisal of success of Rdg.	489	27.4	13.7	21.2		13.7				
d) Recruitment of personnel involved in Rdg. Prog.	357				42.2					
e) Selection of Rdg. Materials	514	24.9								20.6
f) Supervision of classroom teaching	537		45.6			21.6				
g) Provision of diagnostic instruction	397	30.7								
h) Provision of diagnostic testing	388	15.9	19.5	17.9				19.8		
i) Supervision in										
i) all elementary schools	411			28.4		24.5				
ii) individual school	299		53.5	15.3		13.3				
j) Interpretation to parents	434	40.0	33.6							
(Other figures were not significant)										
Participants		1	2	3	4	5	6	7	8	9
a) Development of goals	1044	23.5	20.2	13.8		12.3				
b) Implementation of reading program	930	23.4	24.7	15.0		15.2				
c) Appraisal of success of reading program	1016	22.1	23.3	11.8		17.0				
d) Recruitment of personnel involved in rdg. prog.	613		23.9	19.0		20.5				
e) Selection of reading materials	1026	21.8	19.6	14.3				10.2		
f) Supervision of classroom teaching instruction	759		22.2	19.7		26.6				
g) Provision of diagnostic instruction	686	21.5	22.4	13.8						
h) Provision of diagnostic testing	675	29.7	22.9	13.7						
i) Supervision in										
i) all elementary schools	536	16.7	24.2	16.2		20.7				
ii) an individual school	397	19.3	22.1	19.3		22.9				
j) Interpretation to parents	625	30.5	26.2	16.1		11.0				

N. B. Table 21 is a translation of Table 20 into percentages and eliminates insignificant figures.

General Comments from Written Comments of Supervisors, Superintendents, Field Workers and Remedial Reading Teachers

Part A

5. Early achievement in reading should be encouraged but not pressured. The importance of the child's maturity or readiness was stressed by all.

12. (a) All skills mentioned are considered important, but in varying order according to grade level. Remedial teachers seem to stress word attack skills over general comprehension skills. Inspectors also stress word attack skills.

8. Comments on one basal series or multiple authorization show that some favor a single series because of difficulties created by pupil transfer, also stress that there are many good series and that the teacher must use imagination in answering individual differences. Those who favor multiple series see this as an answer to individual differences in reading ability levels. Reading clinicians recommend several basal reading series plus freedom to teachers to choose their own materials.

General Impressions from Written Comments of Classroom Teachers

Kindergarten	- does not exist in most rural areas except for private ones. Therefore an early program is not usually conducted.
Skills	- Many teachers stress the need for more teaching of phonic skills. There seems to be a general lack of understanding of the use to be made of reading manuals.
Basal Series	- Most seem to be satisfied with one series updated - are not familiar with many different series - some want one series for each level of ability - low, average, high. Some say there would be difficulties in pupil transfer.

Part B

1. General misunderstanding of the question regarding controlled and experimental study of a planned reading program is indicated. Several schools reported a planned reading program as one which gave special instruction to remedial cases.

One school reports at Grade Nine level, extensive testing at the beginning of the year in reading and intelligence followed by evaluation at the end of the year to estimate improvement especially in areas of English and Social Studies. Remedial help is given from 8-8:50 a. m. daily plus two classes of Remedial Reading per week and work in S. R. A. Lab. Students with high achievement in reading have two classes in specialized reading and additional library time. Winnipeg and Seven Oaks provide wide range of reading activities according to abilities of students.

6. (a) Non-Graded School - term is confused with "ungraded" by many. Comments show little understanding of how such a program might be conducted. Many do understand the advantage of pupils progressing at their own level of ability.

6. (b) Completely individualized instruction - is recognized by many as desirable but not really considered feasible.

6. (c) Programmed instruction - often used at extreme ends of scale.

9. Library

Most libraries in elementary level are staffed by classroom teachers. They may be supplemented by public library visits, book mobiles, University Extension Library services. Where libraries exist there is a wide variation in services - generally the more able readers spend more time on research or reference work, but all children are given time to use a library (where such exists).

Part C

13. Other Means of Reporting - Nil

Part D

4. (b) Possibilities for In-Service

i. Use student teachers during their visits to schools.

ii. Regular meetings for reading teachers might be held once a month with classes timetabled in such a way that these teachers could be freed for extended time connected with lunch hour or 4 p. m.

APPENDIX G

THE PHONETIC KEYS TO READING EXPERIMENT

RESEARCH REPORTS 5/63, 8/63, 8/64, 8/65

WINNIPEG SCHOOL DIVISION No. 1

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THE WINNIPEG SCHOOL DIVISION NO. 1
Superintendent's Department

Bureau of Tests and Measurements

Research Report 5/63 June 18, 1963.

PROGRESS REPORT ON PHONETIC KEYS TO READING EXPERIMENT

An experiment outlined to compare the effect of teaching reading by a phonetic program and the authorized program (an eclectic program) was initiated in certain grade I and II classes in September, 1962. In order to reduce variability as much as possible, pupils were grouped by sex, ability, and reading readiness and arranged into two equated classes -- experimental and control.

The following table outlines the results obtained when the Gates Primary Reading Test (Type PSR and PPR) was administered to grade 1, and the Gates Advanced Primary Reading Test (Type AWR and APR) to grade II at the end of May, 1963.

SUMMARY OF TEST SCORES -- READING EXPERIMENT 1963

School	Gr	Sex	Type of Reading	Mean Scores - Gates Tests			t-values		
				Experimental	Control	Difference	Calculated	5 per-cent	1 per-cent
School 1	1	Girls	(PSR)	29.83	27.66	2.17	0.73	2.20	3.11
	1	Girls	(PPR)	21.42	19.25	2.17*	2.65	2.20	3.11
	1	Boys	(PSR)	30.46	27.23	3.23	0.95	2.18	3.06
	1	Boys	(PPR)	21.07	19.15	1.92	1.16	2.18	3.06
	2	Girls	(AWR)	30.86	33.00	2.14	0.86	2.16	3.01
	2	Girls	(APR)	21.43	22.36	0.93	0.66	2.16	3.01
	2	Boys	(AWR)	27.11	29.22	2.11	0.56	2.31	3.36
	2	Boys	(APR)	19.11	18.44	0.67	0.64	2.31	3.36
School II	1	Girls	(PSR)	35.28	28.00	7.28*	3.32	2.16	3.01
	1	Girls	(PPR)	21.64	17.78	3.86	1.17	2.16	3.01
	1	Boys	(PSR)	32.00	25.36	6.64*	2.62	2.16	3.01
	1	Boys	(PPR)	20.64	16.07	4.57**	3.41	2.16	3.01
	2	Girls	(AWR)	32.31	30.23	2.08	0.83	2.18	3.06
	2	Girls	(APR)	20.38	20.92	0.54	0.49	2.18	3.06
	2	Boys	(AWR)	32.46	31.53	0.93	0.29	2.14	2.98
	2	Boys	(APR)	18.87	19.93	1.06	0.53	2.14	2.98
School III	1	Girls	(PSR)	33.92	26.61	7.31*	2.18	2.18	3.06
	1	Girls	(PPR)	22.84	19.46	3.38**	5.04	2.18	3.06
	1	Boys	(PSR)	32.22	22.22	10.00**	4.12	2.11	2.90
	1	Boys	(PPR)	22.44	19.33	3.11	1.71	2.11	2.90
	2	Girls	(AWR)	37.31	38.18	0.87	0.89	2.13	2.95
	2	Girls	(APR)	24.18	25.62	1.44	1.61	2.13	2.95
	2	Boys	(AWR)	36.54	35.18	1.36	0.48	2.23	3.17
	2	Boys	(APR)	21.72	24.45	2.73	1.79	2.23	3.17

* significant at 5 percent level
** significant at 1 percent level
PSR = Primary sentence reading
PPR = Primary paragraph reading
AWR = Advanced word recognition
APR = Advanced paragraph recognition

Analysis of Results

The preliminary results of this experiment show that the girls in grade I at School I had significantly higher scores (at the 5 per cent level) in the experimental (phonetic) group than those in the control group for paragraph reading.

At School II, the girls and boys in grade I in the experimental group scored significantly higher (at the 5 per cent level) for sentence reading than did those in the control group. In paragraph reading, the grade I boys in the experimental group scored very significantly higher than the control group at the 1 per cent level.

At School III, the girls and boys in the experimental group scored significantly higher than those in the control group at the 5 per cent and the 1 per cent levels respectively for sentence reading. In paragraph reading the experimental group of girls scored significantly higher at the 1 per cent level than did those in the control group.

All grade II pupils in the experimental classes were taught the skills of the grade I phonetic program before commencing the grade II program.

From the detail outlined above, it would appear that at the grade I level there are significant differences in some areas. At the grade II level, however, the analysis showed no significant differences between the two methods of teaching reading.

These are preliminary results and should be treated as such. More conclusive evidence will develop as the three-year experiment progresses.

THE WINNIPEG SCHOOL DIVISION NO. 1
Superintendent's Department

Bureau of Tests and Measurements

Research Report 8/63 August 15, 1963.

PHONETIC KEYS TO READING EXPERIMENT

This report covers work that has been completed on the Phonetic Keys to Reading Experiment to date. It will supplement information that was contained in progress report 5/63 that was sent to the Board on June 18, 1963. Part A of this report outlines the results for the schools in the "controlled" experiment, and Part B for those in the "uncontrolled" experimental program.

In order to arrive at a basis for comparison of the total reading ability of the experimental (phonetic) and control (eclectric) groups, the Gates scores for word recognition and paragraph reading have been combined, and the percentile levels calculated.

PART A

The committee on the utilization of articulated phonics has requested that pupils' scores in the three control schools be combined and ranked on the percentile scale. Tables 1 to 4 contain the combined scores and frequency distribution for both boys and girls in each of the "controlled" experimental schools in grade I and II, ranked from the highest to the lowest.

The data presented in Tables I and 2 for grade I, and in Tables 3 and 4 for grade II, show the range in the distribution of scores. There appears to be some slight variation, but hardly great enough to draw valid conclusions. For example, the grade I boys' scores range from 23 to 71 for the experimental group, and from 16 to 71 for the control. The grade I girls' scores range from 20 to 71 for the experimental group, and 23 to 71 for the control. The scores for grade II are slightly higher at the lower end of the scale than those for grade I. The grade II boys' scores range from 29 to 70 for the experimental group, and from 23 to 75 for the control. Grade II girls' scores range from 28 to 74 for the experimental group, and from 36 to 77 for the control. The higher scores for grade II are likely due to the fact that the pupils have greater reading skills in grade II than in grade I.

Table 5 gives a comparison of the scores at each of eleven percentile levels ranging from the 10th to the 90th.

An examination of the data shows that for grade I the scores are higher in the experimental group than in the control group at all percentile levels for both boys and girls. In grade II an opposite trend appears to be evident. For example, the scores for grade II girls are higher in the control group than in the experimental group at each of the eleven percentile levels. The scores for grade II boys, however, are not consistently in favor of the control group, but are higher at all percentile levels above and including the median score.

Distribution of Reading Scores - Controlled Experiment - June 1963
(Combined Gates Scores)
GRADE I - BOYS

TABLE I

Score	Experimental				Control				Score	Experimental				Control			
	School I	School II	School III	Total	School I	School II	School III	Total		School I	School II	School III	Total	School I	School II	School III	Total
									49	2			2		1		1
									48	1	1		2	1			1
									47						1	2	3
									46							1	1
									45	2			2	2		1	3
									44					1			1
									43	3	1		4	2		2	4
									42					1	1		2
									41			1	1				
									40			1	1	1			1
									39		1		1		1		1
									38						2		2
									37		1		1			1	1
									36						1		1
71			1	1	1			1	35							1	1
70			1	1					34		1		1				
69	1			1	1			1	33						2		2
68	1	2		3	1			1	32							3	3
67	1		1	2					31								
66		1		1					30								
65		1		1					29			1	1				
64			1	1	1			1	28						1	1	2
63	1		1	2	2		1	3	27								
62		2	1	3					26								
61		1		1		1		1	25							1	1
60		1		1					24								
59		1	1	2					23	2			2	1			1
58			1	1					22								
57		1		1	1			1	21					2	1		3
56	2			2	1			1	20								
55			1	1					19						1		1
54	1	1	1	3			1	1	18								
53			1	1		2		2	17								
52									16							1	1
51			3	3	2	1		3									
50	5	1		6	3		1	4									
									Total	22	17	17	56	24	16	17	57

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Research Report 8/63 - Appendix

TABLE I PERCENTILE COMPARISON - CONTROLLED EXPERIMENT
June 1963 - Grade I

	Experimental (N = 101)	Control (N = 99)
90%ile	67.6	61.0
80%ile	63.4	54.0
75%ile Q_3	62.3	52.8
70%ile	61.2	50.8
60%ile	56.2	47.8
50%ile (mdn.)	54.4	45.4
40%ile	51.1	42.6
30%ile	49.3	39.8
25%ile Q_1	47.8	37.9
20%ile	45.3	35.9
10%ile	40.6	28.0

Grade II

	Experimental (N = 96)	Control (N = 96)
90%ile	68.0	71.2
80%ile	63.1	66.9
75%ile Q_3	61.0	64.0
70%ile	59.6	62.0
60%ile	57.8	59.6
50%ile (mdn.)	54.0	57.0
40%ile	52.0	52.7
30%ile	49.3	47.4
25%ile Q_1	47.0	46.2
20%ile	44.9	44.6
10%ile	40.6	41.7

TABLE 2 Number of Pupils in Controlled Experiment

School		No. pupils at beginning of experiment (1)	No. pupils tested in May 1963 (2)
I	Exp.	84	70
	Control	84	67
II	Exp.	107	66
	Control	107	67
III	Exp.	76	61
	Control	76	61
Totals		534	392

(1) From list of equated pairs (2) From frequency distribution

Distribution of Reading Scores - Controlled Experiment - June 1963
(Combined Gates Scores)
GRADE I - GIRLS

TABLE 2

Score	Experimental				Control				Score	Experimental				Control			
	School I	School II	School III	Total	School I	School II	School III	Total		School I	School II	School III	Total	School I	School II	School III	Total
									49			1	1			1	1
									48	1	1		2			3	3
									47	3			3	1	1	1	3
									46						1		1
									45	1		1	2		1	1	2
									44	1			1			1	1
									43	1			1				
									42								
									41					2	2	2	6
									40		1		1	1			1
									39	1			1		2		2
									38								
									37					1		1	2
									36						1		1
71			1	1	1			1	35					1			1
70			1	1					34								
69									33								
68	1	1	1	3					32								
67									31								
66		1	1	2					30							1	1
65		1		1					29								
64			1	1					28								
63		2		2	1			1	27								
62	1	2		3					26								
61							1	1	25					1			1
60	1			1		1		1	24								
59									23						1		1
58			1	1	1			1	22								
57									21								
56	2	1	2	5		1		1	20			1	1				
55		3	1	4		1	1	2									
54	1	1	1	3	1	2		3									
53	1	1		2	1			1									
52					1			1									
51			1	1		1		1									
50	1			1			1	1									
									Total	16	15	14	45	13	15	14	42

Distribution of Reading Scores - Controlled Experiment - June 1963
(Combined Gates Scores)
GRADE II - BOYS

TABLE 3

Score	Experimental				Control				Score	Experimental				Control			
	School I	School II	School III	Total	School I	School II	School III	Total		School I	School II	School III	Total	School I	School II	School III	Total
									49					1			1
									48							1	1
									47	1			1	1	1	1	3
									46		1		1			1	1
									45	2			2			1	1
80									44	1		1	2		2		2
79									43					2	1		3
78									42						2		2
77									41	1	1		2		1		1
76									40								
75						1	2	3	39						2		2
74									38	1			1				
73							2	2	37								
72						1	1	2	36		1		1	1			1
71						1		1	35	1			1				
70	1			1	1			1	34								
69		1	1	2			1	1	33					1			1
68			3	3	1			1	32					1			1
67							1	1	31								
66			1	1		1		1	30		1		1				
65									29		1		1				
64						1		1	28								
63									27								
62		1	1	2	1			1	26								
61		1		1	1	1		2	25								
60		1	1	2		1		1	24								
59		2	1	3		2		2	23						1		1
58		1		1	1			1									
57						1		1									
56	1	1		2													
55					1			1									
54		1	2	3		1	2	3									
53	1			1													
52	1		1	2	1			1									
51	1	2		3													
50			1	1													
									Total	12	17	13	42	14	21	13	48

Distribution of Reading Scores - Controlled Experiment - June 1963
(Combined Gates Scores)
GRADE II - GIRLS

TABLE 4

Score	Experimental				Control				Score	Experimental				Control			
	School I	School II	School III	Total	School I	School II	School III	Total		School I	School II	School III	Total	School I	School II	School III	Total
									49		1		1	1	1	1	3
									48	2			2	1			1
									47		1		1		1		1
									46	1			1	1	1		2
									45	1			1		2		2
80									44		1		1		1		1
79									43		2		2		1		1
78									42					1			1
77							1	1	41	1	1		2		1		1
76									40		1		1				
75									39								
74			1	1					38	1			1				
73									37								
72		1	1	2			1	1	36						1		1
71	1			1			1	1	35								
70							1	1	34								
69	1			1		1	1	2	33								
68							1	1	32	1			1				
67							1	1	31								
66			1	1	1		1	2	30								
65			1	1	1			1	29								
64			3	3	2			2	28	1			1				
63	2	1	2	5													
62					1		2	3									
61			2	2			2	2									
60					2	1		3									
59	2	2	1	5			2	2									
58		1		1		1		1									
57					1	2	2	5									
56	2	1		3													
55		1		1													
54	1	1	1	3	1	1		2									
53	2	1	1	4	1			1									
52	1			1	1			1									
51			1	1													
50		1	2	3	1			1									
									Total	20	17	17	54	16	15	17	48

PERCENTILE COMPARISON - CONTROLLED EXPERIMENT
June 1963 Grades I and II

TABLE 5

Grade I

	Experimental	Control	Experimental	Control
	Boys		Girls	
90%ile	67.6	62.9	67.7	58.3
80%ile	63.4	53.3	63.5	54.4
75%ile Q_3	62.2	51.1	62.4	53.7
70%ile	60.7	50.2	61.7	51.9
60%ile	56.3	47.3	56.1	48.2
50%ile (mdn.)	53.5	44.7	55.1	46.8
40%ile	50.2	42.4	53.8	44.3
30%ile	48.9	36.6	50.0	40.9
25%ile Q_1	46.5	34.8	48.1	40.6
20%ile	43.3	32.3	47.2	38.7
10%ile	39.1	23.2	44.0	35.7

Grade II

	Experimental	Control	Experimental	Control
	Boys		Girls	
90%ile	68.4	72.6	66.1	69.1
80%ile	62.3	68.9	63.3	65.7
75%ile Q_3	61.0	66.5	62.8	64.0
70%ile	58.7	62.1	60.9	62.0
60%ile	57.7	58.9	58.9	60.1
50%ile (mdn.)	53.8	54.2	54.5	57.5
40%ile	51.4	47.7	52.9	56.9
30%ile	47.1	44.9	49.9	49.9
25%ile Q_1	45.3	43.5	48.3	48.8
20%ile	44.2	42.7	46.3	47.1
10%ile	37.5	38.9	41.2	44.3

Table 6 gives a comparison of the grade scores for grade II pupils in the three "controlled" schools. The grade score is obtained from a table of norms that is used to convert raw scores into grade scores.

Average Grade Score for "Controlled" Classes
Grade II, 1962 and 1963

TABLE 6

		Experimental Group				Control Group	
School	No. of Pupils	Average Grade Score		School	No. of Pupils	Average Grade Score	
		1962	1963			1962	1963
I	29	2.6	4.0	I	30	2.5	4.1
II	32	2.6	3.9	II	31	2.5	4.0
III	20	2.9	4.4	III	14	3.0	4.8
Totals	81				75		
Ave. (weighted)		2.6	4.1			2.6	4.2
Ave. Gain			1.5				1.6

The data in Table 6 indicates that there is practically no difference in grade gain between the experimental and control classes.

Table 7 outlines the results obtained when the Gates Primary Reading Test (Type PSR and PPR) was administered to grade I, and the Gates Advanced Primary Reading Test (Type AWR and APR) to grade II at the end of May 1963. These data have been subjected to a statistical analysis to determine whether or not a significant difference exists between the experimental and control groups at each of schools in the controlled experiment. The calculated "t-value" has been compared with t-values required for significance at the 5 per cent level.

SUMMARY OF AVERAGE TEST SCORES - CONTROLLED CLASSES 1963
TABLE 7

				Average Scores - Gates Tests			t-values (I)		
School	Gr.	Sex	Type of Reading	Experimental	Control	Difference	Calculated	5 percent	Remarks
School I	I	Girls	PSR	29.83	27.66	2.17	0.73	2.20	NS
	I	Girls	PPR	21.42	19.25	2.17*	2.65	2.20	S
	I	Boys	PSR	30.46	27.23	3.23	0.95	2.18	NS
	I	Boys	PPR	21.07	19.15	1.92	1.16	2.18	NS
	2	Girls	AWR	30.86	33.00	2.14	0.86	2.16	NS
	2	Girls	APR	21.43	22.36	0.93	0.66	2.16	NS
	2	Boys	AWR	27.11	29.22	2.11	0.56	2.31	NS
	2	Boys	APR	19.11	18.44	0.67	0.64	2.31	NS
School II	I	Girls	PSR	35.28	28.00	7.28*	3.32	2.16	S
	I	Girls	PPR	21.64	17.78	3.86	1.17	2.16	NS
	I	Boys	PSR	32.00	25.36	6.64*	2.62	2.16	S
	I	Boys	PPR	20.64	16.07	4.57**	3.41	2.16	S
	2	Girls	AWR	32.31	30.23	2.08	0.83	2.18	NS
	2	Girls	APR	20.38	20.92	0.54	0.49	2.18	NS
	2	Boys	AWR	32.46	31.53	0.93	0.29	2.14	NS
	2	Boys	APR	18.87	19.93	1.06	0.53	2.14	NS
School III	1	Girls	PSR	33.92	26.61	7.31*	2.18	2.18	S
	I	Girls	PPR	22.84	19.46	3.38**	5.04	2.18	S
	1	Boys	PSR	32.22	22.22	10.00**	4.12	2.11	S
	1	Boys	PPR	22.44	19.33	3.11	1.71	2.11	NS
	2	Girls	AWR	37.31	38.18	0.87	0.89	2.13	NS
	2	Girls	APR	24.18	25.62	1.44	1.61	2.13	NS
	2	Boys	AWR	36.54	35.18	1.36	0.48	2.23	NS
	2	Boys	APR	21.72	24.45	2.73	1.79	2.23	NS

(I) t-value is statistical ratio of difference between two means divided by standard error.
S Significant difference between experimental and control.
NS No significant difference between experimental and control.
* Significant at 5 percent level
** Significant at 1 percent level
PSR = Primary sentence reading
PPR = Primary paragraph reading
AWR = Advanced word recognition
APR = Advanced paragraph reading

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 8

GRADE I - BOYS

EXPERIMENTAL

Score	A	E	I	J	K	L	M	P	S	V	W	X	Total
71				1	1				1				3
70				2	1				2			1	6
69			1	4		1		1	5	1	1		14
68	3		1		1	1			1			2	9
67	2		2	1		1		2	2	1	1		12
66						1		3	2	1	2	1	10
65		4	1	1		2			2				10
64		4				1			2	2	2		11
63	1	4	1		1	1			1			2	10
62		1							2		2		5
61	1	2	1						1	1	1		7
60		1			2					1	1	2	7
59			1		1	1		1	1	1	1		7
58			1		1	1							3
57								1		1		2	4
56	1		1			2				1		2	7
55	1	1		1	1						2		6
54			1										1
53					1				1				2
51						1			1				2
50			1										1
49									1	1		1	3
48		1		1		1			1		3	1	8
47	1					1					1		3
46			1	1					1			1	4
45		1				1						1	3
44		1	1	1	2								5
43					1				1				2
41		1			1								2
40		1	1						1				3
39		1			1					1	1		4
38					1			1					2
37		2	1										3
36		1										1	2
35		1											1
34										1			1
33												1	1
32												1	1
31				1						1			2
30										1			1

School

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 8 (cont'd) GRADE I - BOYS

EXPERIMENTAL

Score	A	E	I	J	K	L	M	P	S	V	W	X	Total
	School												
29		2								1		1	4
28					1					1			2
27										2			2
26	1												1
24		1											1
20		2											2
19	1												1
18		1											1
15												1	1
14	1												1
12		2											2
11		1											1
8	1	1											2
Total	14	37	15	14	17	16		9	29	19	18	21	209

CONTROL

Score	A	N	U	H	Q	D	O	R	T	G	F	C	B	Total
	School													
71									2			3		5
70									2			2		4
69		1							3			1		5
68	2								2					4
67	1	1							1	1				4
66	1			1					1					3
65	2	1		1					1					5
64				1										1
63									1					1
61									2	1				3
60									2	1				3
59						1			2					3
57									3					3
56	1	1	1	1										4
55	1			3										4
54						2			1	1		1		5
53	2				1				1		1			5
52						1			2	1		2		6
51			2			1			1	1		1		6
50	2	1						1		1		1		6

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 8 (cont'd)

GRADE I - BOYS

CONTROL

Score	A	N	U	H	Q	D	O	R	T	G	F	C	B	Total
49									3	2	1	1		7
48			1	3		1		1			1	1		8
47		1		1					1					3
46		1								1	1			3
45	1	1	1		1						1			5
44			1	1	1				1	1				5
43											2			2
42					1				1		1			3
41			1						1		1	1		4
40	1		1		1						1			4
39		1	1							1	1	1		5
38		1			1	1				1				4
37		1	1											2
36	1	1	2		3					1		1		9
35								1	1		1	1		4
34	1	2			1	1								5
33				1				1	1					3
32			2			1				1				4
31		1	1					2						4
30			1			1		1		1		1		5
29			1								1	1		3
28			1					1						2
27		1						1			1	1		4
26		1	1						1		1	1		5
25		1			1			1		1		2		6
24		1										1		2
23								1				1		2
22						1				1				2
21		1												1
20		1												1
18								1						1
17		1												1
16					1									1
15												1		1
14	1													1
13		1										2		3
11		1									1	1		3
9										1				1
2												1		1
Total	17	24	19	13	12	11		12	37	19	16	30		210

School

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963

(Combined Gates Scores)

TABLE 9

GRADE I - GIRLS

EXPERIMENTAL

Score	School												Total
	A	E	I	J	K	L	M	P	S	V	W	X	
71		1		1	1			1	1				5
70						2		1			1	2	6
69	4			1	2	3		4	1				15
68			1	2	1				4		3	1	12
67	1	2		1				1	3		2	1	11
66			1		1			2	2		1	2	9
65			1	1					3		1		6
64	2	4	1	1		1			1				10
63	1	1	1					1	2	1		1	8
62	1	2		1		3					1		8
61	1	1			2			1	1				6
60	1			1									2
59		3	1					2			3	1	10
58					1			2	1		1		5
57				1									1
56				1	1				1		2		5
55			1		1							3	5
54		1	1						1	1		1	5
53			1	1							1		3
52	1	1	2	1	1			1					7
51						2			1			1	4
50	1												1
49	1				1							1	3
48			1	1	1				2			1	6
47					1								1
46								1				1	2
44		1											1
43				1				1				2	4
42					1	1						2	4
41												1	1
40		1											1
39								1					1
35										1			1
33					1								1
32		1											1
27			1							1		1	3
26												1	1
24					1								1
23												1	1
18												1	1
17												1	1

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 9 (cont'd)

GRADE I - GIRLS

CONTROL
School

Score	B	N	U	H	Q	D	O	R	T	G	F	C	Total
44		1			1			1		1	1		5
43	1				2			1		1		1	6
42		1			3	1					1		6
41						1		1					2
40		1		1		1		1					4
39			1							1		2	4
38										1		2	3
37		2											2
36										1	1		2
35				1	2						1		4
34				1				1				1	3
33					1						1		2
32											1		1
31			1		1								2
29		2						1		1			4
28		1	1							1	1		4
27			1		1								2
26	1							2			1		4
24		1						1		1			3
23					1							1	2
19												1	1
18		1									2		3
16												1	1
13												1	1
12	1												1
11											1		1
Total	14	24	10	12	14	10		14	31	15	19	31	194

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

Table 9 (cont'd)

GRADE I - GIRLS

EXPERIMENTAL

Score	School												Total
	A	E	I	J	K	L	M	P	S	V	W	X	
16										1			1
15			1										1
13												1	1
12												1	1
Total	14	19	14	15	17	12		19	24	5	16	28	183

CONTROL

Score	School												Total
	B	N	U	H	Q	D	O	R	T	G	F	C	
71		1				1			4			1	7
70	1	1		1					1			3	7
69	1	1		1					6			2	11
68	1					1			2			1	5
67	1					1			2			1	5
66									2				2
65				2					1		1	2	6
64		2							1		1	3	7
63	2											2	4
62	1			1					1				3
61	1	1						1	1	1		1	6
60									2	1	1		4
59	2	2		1					1		1		7
58				1				1	1				3
57		1											1
56	1	1											2
55		1				2			1	1		1	6
54									1				1
53								1					1
52		1	2	1				1				1	6
51				1		1			1	1			4
50			1										1
49			1		1	1				1	1		5
48			1		1				1			2	5
47		2	1						1		1		5
46								1	1				2
45										2	2	1	5

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 10

GRADE II - BOYS

Score	EXPERIMENTAL School												Total
	E	A	H	J	K	L	M	S	V	W	X	K	
78		1				1				1			3
76						1				1	1		3
75		1					1					1	3
74								1			1		2
72		2			1	1	2					1	7
71	1							1		1			3
70					1					1	1		3
69											1		1
68		2				2		2	1	2			9
67		1				1	1			1			4
66	1						1	1	1	1			5
65			1	1		1		1			2	1	7
64		1		2				2		1			6
63		1	2	1			1			2		1	8
62			1				2		1		1		5
61			2				1	1	1	1			6
60				2									2
59			2	1						2			5
58							1	1		1		1	4
57			1		2					1			4
56			2	1		1						1	5
55						1							1
54		1	1	1	1								4
53	1			2					1				4
52	2												2
51	1		2			1	1	1					6
50		1											1
49					1		1		1				3
48	1												1
47				3								1	4
46							1		1				2
45			1				1				1		3
44	1						1						2
43							2						2
42		1											1
41					1	1						1	3
40	2												2
39	1										1		2
38	1												1
37	1												1
36	1												1
33				1									1
32				1									1
Totals	14	12	15	16	7	11	17	11	7	16	9	8	143

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 10 (cont'd)

GRADE II - BOYS

Score	CONTROL School												Total
	N	B	U	H	Q	D	O	T	G	F	C	Q	
80								1					1
79		1						1					2
77		1											1
75		1											1
73		1					1	1		2		2	7
72	1	1						2			2		6
71							1	1	1	1			4
70	2	1						2					5
69	1	1						2					4
68					1			2					3
67	1									1			2
66		2			4			1		1		1	9
65	1						1	1		1			4
64	1	1	2					2	1				7
63		1			1			1			1		4
62			1	1			2						4
61		1	1				1	1		1	1		6
60									1				1
59	1	1			1		2		1	2	2		10
58					1							1	2
57								2	1	1			4
56		1	1			1	1		1				5
55			2							2			4
54			1		2							1	4
53											1		1
52									1	1			2
51				2	2		1		2	1		1	9
50				1									1
49	1		3	2	1	1					1		9
48							1						1
47			1	1							1	1	4
46			1	1					1				3
45				1							1		2
44			2	1					1			1	5
43			1						1	1			3
42			1						1				2
41						1	1						2
40				1			1			1			3
37			1			1						1	3
36												1	1
35						1							1
34				1								1	2
33						1							1
30												1	1
29				1									1
28									1				1
26						1							1
25			1			2							3
11				1									1
Total	9	14	19	14	13	9	13	20	14	16	10	12	163

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 11 GRADE II - GIRLS

Score	EXPERIMENTAL School												Total
	E	A	I	J	K	L	M	S	V	W	X	K	
79								1					1
78		1											1
77								1					1
76					1								1
75		2								2			4
74								2			1		3
73		1						1				1	3
72		3						1			1		5
71		2					1			2		2	7
70		1				2		1		1			5
69		2								1			3
68		2			1	2				2	1	1	9
67		1	1	1	2	1				1	2	1	10
66	1	2		1	1	1		1			1	2	10
65					2	3	1	2		2	1		11
64		1					2			1	1		5
63	1	1	2					1			1		6
62		1	2			1	2			2	2		10
61			2			1					1		4
60	1					1					1	2	5
59				1			1		1	1		1	5
58		1	4					1			1		7
57	1			1		1							3
56	4		1	1	1	1	1	1		1	2		13
55	1		2		1	2	1	1	1	1		1	11
54											2		2
53				1		1							2
52					1						1		2
51			1	1					1	1		1	5
50			2		2								4
49				2	1	1					1		5
48	3		1										4
46	3			1							1		5
45						1							1
44				1									1
43						1							1
42					1								1
41	1			1									2
39				1	1		2						4
34					1								1
Total	16	21	18	13	16	20	11	14	3	18	21	12	183

DISTRIBUTION OF READING SCORES - "Uncontrolled" Classes - June 1963
(Combined Gates Scores)

TABLE 11 (cont'd)

GRADE II - GIRLS

CONTROL

Score	School												Total
	N	B	U	H	Q	D	O	T	G	F	C	Q	
78		2											2
76		1											1
75								2					2
74	1												1
73		1			1								2
72	1	4						2		2			9
71								1					1
70	1							1			1		3
69	1	4			1			1		1	2		10
68	1	1						1		1	1		5
67	2	1									1		4
66	2	2			1			1	1		4		11
65	2			1				1	1				5
64			1				1	1					3
63						1	2				1		5
62		1			2				1	1	2		7
61	1	1	1		4								7
60		1					1	1				1	4
59					2	1	1		2		1		7
58			1					1			1		3
57			1		1	1	1						4
56			1					2			1	2	6
55	1		2		1		1						5
54			1	2	2		2		1		3		11
53	1				2		1		1		3		8
52			1	1			1			1	1	1	6
51	1		1				1				1		4
50				1			1			1		1	4
49										1			1
48				2		2	1		1		1	2	9
47			1	1			1		1				4
46				1		1			1				3
45				2						1		1	4
44						1						1	2
43				1			2						3
42				1			2						3
41			1						1				2
40				1								1	2
39			1			2			3		1	1	8
38						1			1				2
37	1											1	2
36						2						1	3
33												1	1
29								1					1
19										1			1
Totals	16	20	13	14	17	14	17	15	16	10	25	14	191

PART B

The first point that must be emphasized in regard to the schools in the "uncontrolled" group of classes is that the pairs are not equated. This means that no attempt was made to equate or group the pupils in regard to sex, ability, and reading readiness when the experiment was initially established. Although this method does not lend itself to a strict control of variables it does provide a check of the "controlled" experiment to confirm any differences if they are present.

Tables 8 to 11 show the distribution of scores for boys and girls in grade I and II in the experimental and control groups for schools in the "uncontrolled" program.

Table 12 gives the median, the 25th (Q_1) and 75th percentile (Q_3) scores for grade I.

Media and Quartile Scores for "Uncontrolled" Classes
Grade I, May, 1963

TABLE 12

Level	Experimental Group		Control Group	
	Boys (N=209)	Girls (N=183)	Boys (N=210)	Girls (194)
75th percentile Q_3	65.68	66.80	54.40	63.71
50th " (median)	59.43	61.25	44.70	50.75
25th " (Q_1)	44.92	51.75	32.12	39.12

	Experimental Group N=392	Control Group N=404
75th percentile (Q_3)	66.22	60.07
50th " (median)	60.11	47.65
25th " (Q_1)	47.95	35.00

The data in Table 12 show that the scores favor the experimental group. It must be kept in mind that these are unequated groups and some caution must be exercised when interpreting these data.

Table 13 gives the median, the 25th (Q_1), and 75th (Q_3) percentile scores for grade II.

Median and Quartile Scores for "Uncontrolled" Classes
Grade II, May, 1963

TABLE 13

Level	Experimental Group		Control Group	
	Boys (N=143)	Girls (N=183)	Boys (N =163)	Girls (N=191)
75th percentile (Q_3)	67.06	67.22	65.97	65.80
50th " (Median)	61.08	61.85	58.25	56.62
25th " (Q_1)	51.29	55.02	48.25	48.25

TABLE 13 (cont'd)

	Experimental Group N=326	Control Group N=354
75th percentile (Q_3)	66.64	66.12
50th " (median)	61.57	57.25
25th " (Q_1)	53.58	48.25

The scores in the experimental group are higher at the median, and 25th percentile level than in the control. At the 75th percentile, however, there is practically no difference between experimental and control scores.

Table 14 shows a comparison of the average grade scores at the end of grade I in 1962 and at the end of grade II in 1963 for the experimental and control classes in the uncontrolled program.

Average Grade Score for "Uncontrolled" Classes
1962 and 1963

TABLE 14

School	No. of Pupils	Experimental Group Average Grade Score		Rating (1)	School	No. of Pupils	Control Group Average Grade Score		Rating
		1962	1963				1962	1963	
EA	33	3.1	5.0	H-L	CB	34	3.9	5.1	H
EE	50	2.5	3.7	A-L	CN	24	3.4	5.2	H-L
EI	30	2.9	4.2	A	CU	32	2.6	3.8	A
EJ	28	3.1	4.0	A	CH	28	2.7	3.7	H-L
EK	42	3.3	4.3	A+	CQ	46	3.1	4.1	A+
EL	30	3.3	4.7	A+	CD	23	2.4	3.4	L
EM	26	3.0	4.2	A	CO	29	3.0	4.3	A
EP	31	3.3	4.4	H					
ES	24	3.9	5.0	H	CT	35	3.6	5.0	A+
EV	10	2.9	4.1	A	CG	25	2.6	3.9	L
EW	33	3.4	4.8	H	CF	24	3.3	4.4	A
EX	56	3.1	4.5	H-L	CC	32	3.5	4.3	H-L
Totals	393					332			
Ave.		3.1	4.6				3.1	4.3	
Ave. Gain			1.5					1.2	

(1) Class Rating: H=High A= Average L= Low

The classes in Table 14 have been rated high, average, or low in scholastic achievement for the purpose of comparison. Generally the grade scores, whether high, average, or low, are closely related to the class rating. The average gain for the experimental classes is 1.5 and 1.2 for the control.

Table 15 outlines the results obtained when the Gates Primary Reading Test (Type PPR and PSR) was given to the "uncontrolled" grade I classes in May 1963. These data have been subjected to a statistical treatment to determine significance between the experimental and control classes.

The data presented in Table 15 does not follow any consistent trend. It will be noted that there are 27 cases where the results are significantly in favor of the experimental group, and 33 where there is no significant difference between the experimental and control groups. This inconsistency of results eliminates the possibility of establishing any set pattern or trend.

Table 16 outlines the results obtained when the Gates Primary Reading Test (Type AWR and APR) was given to the "uncontrolled" grade II classes in May, 1963. The data have been subjected to a statistical analysis to determine if there are any differences between the average scores for the two methods.

The results for grade II show that in 36 out of 48 cases, there was no significant difference between the experimental and control group. In 9 cases the experimental group was significantly higher than the control, and 3 cases where the control group was significantly higher than the experimental.

SUMMARY OF AVERAGE OF TEST SCORES - UNCONTROLLED CLASSES - GRADE 1
May 1963

TABLE 15

School	Sex	Type of Reading	Average Scores - Gates Tests			t-values		
			Experimental (E)	Control (C)	Difference	Calculated	5 per-cent	Remarks
EA-CB	Boys	PPR	17.50	19.41	1.91	0.75	2.15	N.S
		PSR	31.57	32.65	1.08	0.24	2.15	N.S
	Girls	PPR	22.14	20.86	1.28	0.76	2.16	N.S
		PSR	39.64	34.71	4.93	1.43	2.16	N.S
EE-CN	Boys	PPR	24.12	14.14	9.98	3.91	3.39	S
		PSR	38.59	21.00	17.59	2.97	2.45	S
	Girls	PPR	24.29	17.00	7.29	3.82	2.23	S
		PSR	39.00	27.73	11.27	2.58	2.23	S
EE-CN	Boys	PPR	12.45	15.18	2.73	1.91	2.10	N.S
		PSR	16.80	21.88	5.08	1.61	2.17	N.S
	Girls	PPR	18.40	21.23	1.83	1.27	2.05	N.S
		PSR	26.00	31.08	5.08	1.36	2.56	N.S
EI-CU	Boys	PPR	21.06	15.16	5.90	4.68	2.12	S
		PSR	35.44	23.37	12.07	5.20	2.12	S
	Girls	PPR	20.29	15.90	4.39	2.55	2.20	S
		PSR	32.64	26.40	6.24	1.71	2.20	N.S
EJ-CH	Boys	PPR	23.14	20.08	3.06	1.95	2.17	N.S
		PSR	37.07	32.54	4.53	1.47	2.19	N.S
	Girls	PPR	22.87	21.42	1.45	0.99	2.18	N.S
		PSR	37.33	33.58	3.75	1.25	2.18	N.S
EK-CQ	Boys	PPR	20.53	16.17	4.36	2.69	2.17	S
		PSR	32.06	20.92	11.14	3.88	2.14	S
	Girls	PPR	21.12	16.71	4.41	2.37	2.14	S
		PSR	33.53	21.64	11.89	4.93	2.13	S
EL-CD	Boys	PPR	22.25	17.09	5.16	3.66	2.20	S
		PSR	36.94	26.00	10.94	3.24	2.21	S
	Girls	PPR	22.92	21.10	1.82	1.52	1.26	S
		PSR	38.83	32.80	6.03	1.66	2.24	N.S
EM-CO	Boys	PPR	22.89	13.37	9.52	6.85	2.11	S
		PSR	38.50	17.32	21.18	8.02	2.10	S
	Girls	PPR	22.75	17.86	4.89	2.93	2.17	S
		PSR	38.42	28.00	10.42	3.36	2.17	S
EP-CR	Boys	PPR	22.89	13.08	9.81	7.69	2.24	S
		PSR	38.78	18.50	20.28	6.34	2.27	S
	Girls	PPR	22.95	17.00	5.95	4.02	2.15	S
		PSR	37.79	24.21	13.58	4.88	2.13	S
ES-CT	Boys	PPR	24.27	23.88	0.39	0.87	2.15	N.S
		PSR	43.13	39.81	3.32	2.21	2.13	S
	Girls	PPR	23.14	24.67	0.53	0.39	2.13	N.S
		PSR	41.07	40.89	0.18	0.11	2.13	N.S

TABLE 15 (Cont.'d)

School	Sex	Type of Reading	Average Scores - Gates Tests			t-values		
			Experimental (E)	Control (C)	Difference	Calculated	5 per-cent	Remarks
ES-CT	Boys	PPR	21.29	20.29	1.00	0.91	2.10	N.S
		PSR	34.00	30.90	3.10	1.60	2.10	N.S
	Girls	PPR	20.90	23.00	2.10	1.58	2.24	N.S
		PSR	38.80	37.00	1.80	0.82	2.22	N.S
EV-CG	Boys	PPR	18.37	18.21	0.16	0.09	2.10	N.S
		PSR	30.95	24.11	6.84	2.02	2.10	N.S
	Girls	PPR	14.80	18.33	3.53	0.97	2.71	N.S
		PSR	24.20	24.80	0.60	0.10	2.71	N.S
EW-CF	Boys	PPR	21.83	16.31	5.52	4 64	2.12	S
		PSR	35.94	22.25	13.69	5.52	2.12	S
	Girls	PPR	22.56	17.00	5.56	4.03	2.10	S
		PSR	40.06	22.84	17.22	6.35	2.10	S
X-CC	Boys	PPR	15.83	12.32	3.51	1.47	1.70	N.S
		PSR	18.33	15.58	2.75	2.10	2.29	N.S
	Girls	PPR	15.00	11.88	3.12	1.27	2.29	N.S
		PSR	18.21	15.75	2.46	0.67	2.24	N.S
EX-CC	Boys	PPR	23.00	24.09	1.09	1.21	2.20	N.S
		PSR	35.27	36.82	1.55	0.47	2.20	N.S
	Girls	PPR	22.92	24.52	1.60	1.80	2.15	N.S
		PSR	37.00	36.00	1.00	0.41	2.13	N.S

NOTE: See Table 7 for notes

SUMMARY OF AVERAGE TEST SCORES - UNCONTROLLED CLASSES - GRADE II
May 1963

TABLE 16

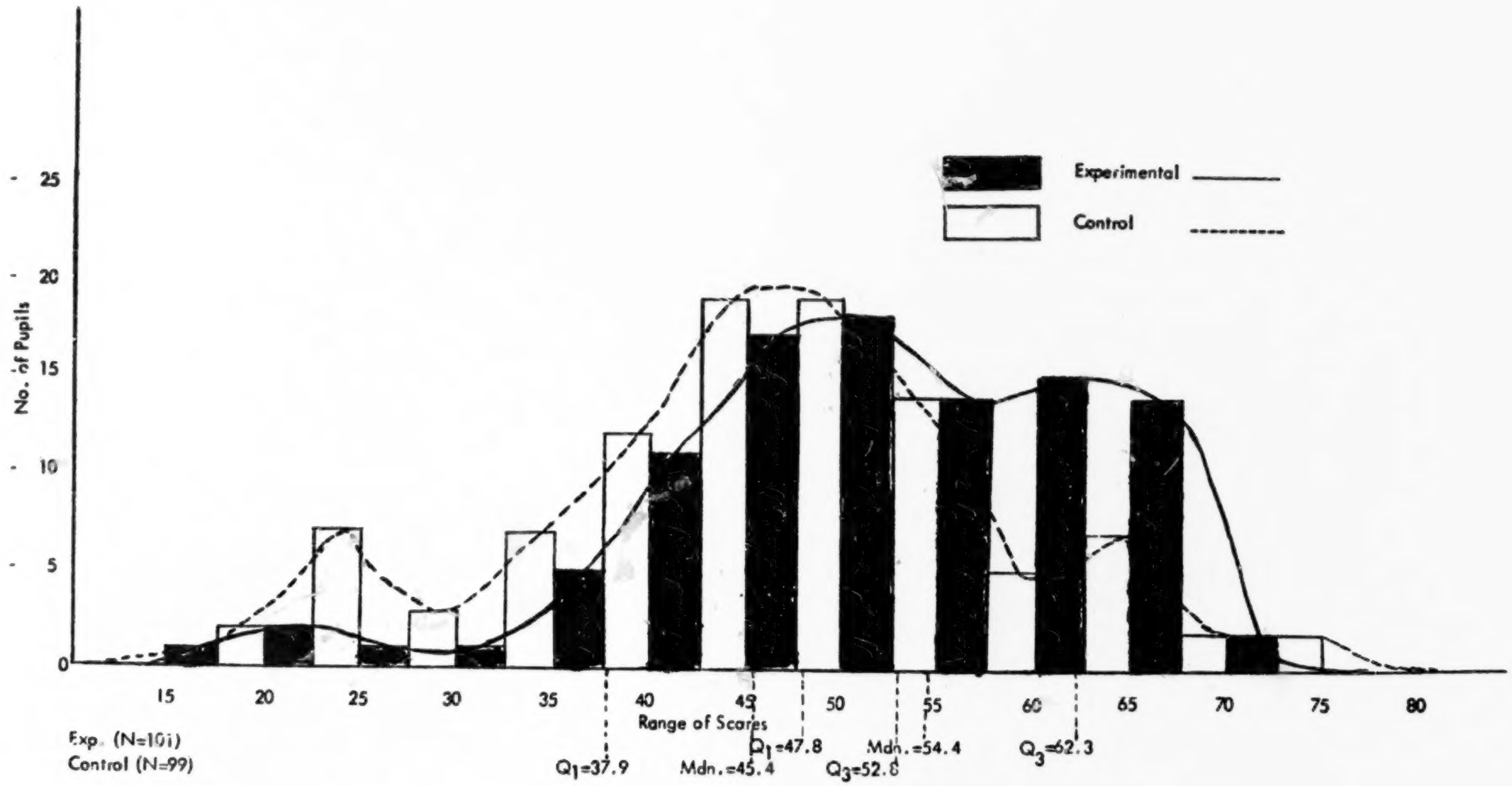
			Average Scores - Gates Tests			t-values		
School	Sex	Type of Reading	Experimental (E)	Control (C)	Difference	Calculated	5 per-cent	Remarks
EA-CB	Boys	AWR	38.83	41.21	2.38	1.55	2.19	N.S
		APR	25.58	26.64	1.06	.63	2.18	N.S
	Girls	AWR	41.76	41.65	.11	.42	2.09	N.S
		APR	27.24	27.45	0.21	.68	2.06	N.S
EE-CN	Boys	AWR	28.64	37.11	8.47	3.05	2.24	S
		APR	19.00	27.89	8.89	5.70	2.20	S
	Girls	AWR	31.75	35.69	3.94	2.06	2.13	N.S
		APR	21.25	27.19	5.94	4.37	2.13	S
EI-CU	Boys	AWR	36.33	31.26	5.07	2.64	2.11	S
		APR	21.20	18.53	2.67	2.50	2.11	S
	Girls	AWR	35.39	32.54	2.85	1.51	2.16	N.S
		APR	22.17	20.54	1.63	1.65	2.14	N.S
EJ-CH	Boys	AWR	33.38	26.07	7.31	2.44	2.15	S
		APR	20.19	17.36	2.83	2.02	2.15	N.S
	Girls	AWR	31.54	28.64	2.90	1.40	2.17	N.S
		APR	20.54	19.86	.68	.42	2.17	N.S
EK-CQ	Boys	AWR	38.50	31.33	7.17	1.96	2.27	N.S
		APR	23.63	18.92	4.71	1.79	2.27	N.S
	Girls	AWR	39.67	26.86	12.81	3.43	2.20	S
		APR	24.25	19.14	5.11	3.36	2.19	S
EK-CQ	Boys	AWR	36.43	36.62	.19	.06	2.40	N.S
		APR	20.71	23.15	2.44	1.33	2.37	N.S
	Girls	AWR	35.00	35.06	.06	.02	2.12	N.S
		APR	21.31	23.88	2.57	1.90	2.13	N.S
EL-CD	Boys	AWR	37.64	22.33	15.31	4.06	2.28	S
		APR	25.73	14.00	11.73	7.47	2.26	S
	Girls	AWR	35.70	25.93	9.77	4.77	2.12	S
		APR	24.30	18.20	6.10	4.59	2.12	S
EM-CO	Boys	AWR	36.65	35.38	1.27	.57	2.15	N.S
		APR	20.94	22.15	1.21	.66	2.45	N.S
	Girls	AWR	36.36	33.18	3.18	1.34	2.20	N.S
		APR	21.45	20.71	0.74	0.50	2.30	N.S
ES-CT	Boys	AWR	39.36	40.90	0.54	0.33	2.18	N.S
		APR	25.18	27.00	1.82	1.60	2.27	N.S
	Girls	AWR	40.64	41.00	0.36	.23	2.15	N.S
		APR	27.00	25.47	1.53	1.20	2.16	N.S
EV-CG	Boys	AWR	36.71	31.57	5.14	2.09	2.32	N.S
		APR	21.14	20.14	1.00	0.44	2.33	N.S
	Girls	AWR	34.67	29.75	4.92	2.18	3.02	N.S
		APR	20.33	20.06	0.27	.21	3.18	N.S

TABLE 16 (Cont'd)

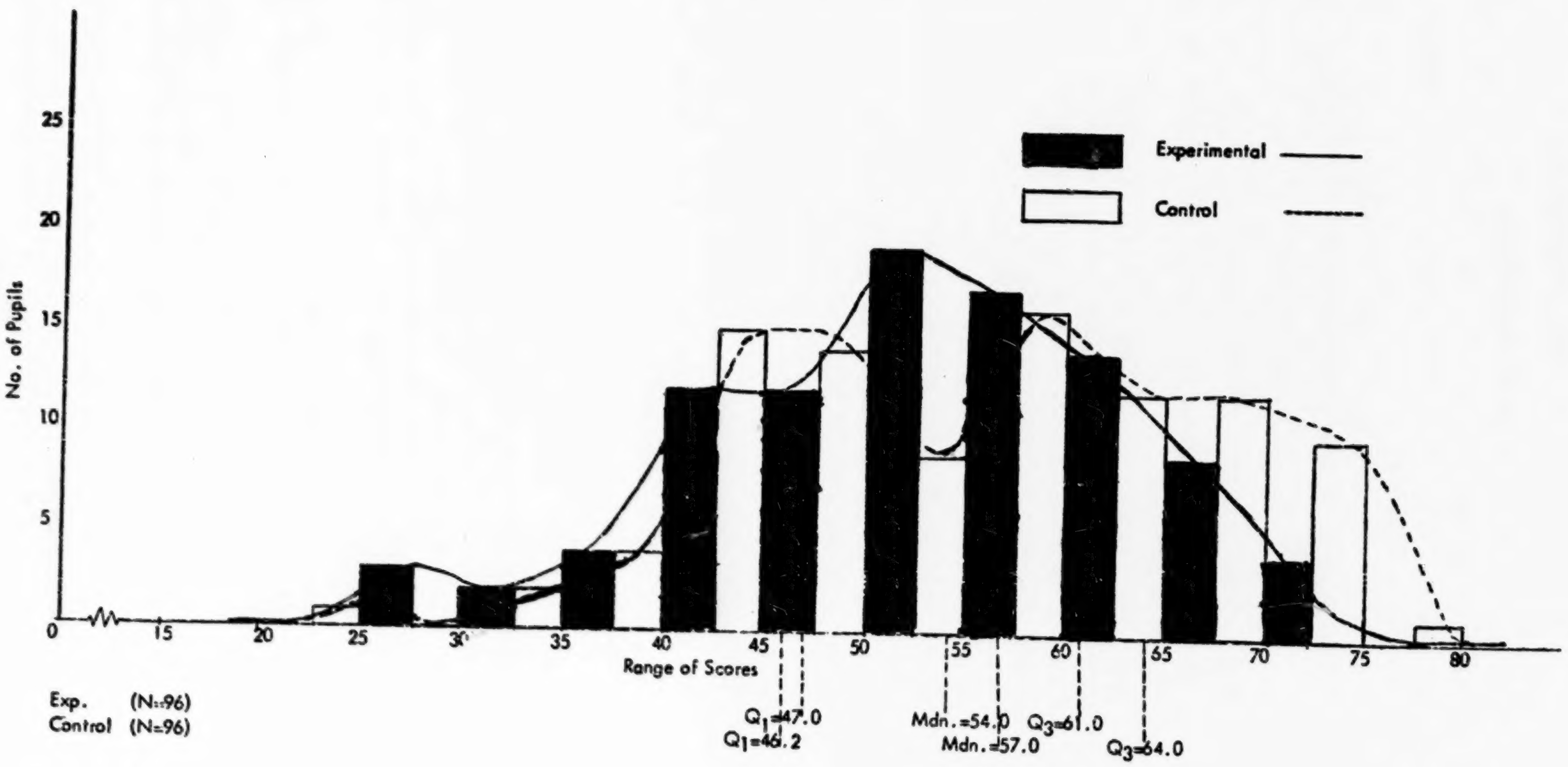
School	Sex	Type of Reading	Average Scores - Gates Tests Experimental (E)	Control (C)	Difference	t-values Calc.	5 per-cent	Remarks
EW-CF	Boys	AWR	40.25	36.44	3.81	2.10	2.13	N.S
		APR	25.25	22.75	2.50	1.64	2.13	N.S
	Girls	AWR	39.50	33.50	6.00	1.76	2.25	N.S
		APR	25.67	22.30	3.37	1.47	2.24	N.S
EX-CC	Boys	AWR	35.00	36.80	1.80	.60	2.29	N.S
		APR	21.50	21.20	0.30	.12	2.29	N.S
	Girls	AWR	36.29	36.56	.27	.17	2.08	N.S
		APR	24.48	22.56	1.92	1.97	2.07	N.S

NOTE: See Table 7 for notes

Graph Showing Distribution of Reading Scores - Grade I - 1963



Graph Showing Distribution of Reading Scores - Grade II - 1963



THE WINNIPEG SCHOOL DIVISION NO. 1

Superintendent's Department

To the Chairman and Members
Special Committee on
Utilization of Articulated Phonics

August 15, 1963.

Phonetic Keys to Reading Reports from Teachers

Experimental Schools

School I - Grade I

Upon completing "Phonetic Keys to Reading" for Grade I, the following impressions may be considered.

The beginning work (i. e., vowels) was difficult - proving a challenge to children and teacher due to the acute listening that was necessary on the part of the children and the great amount of repetition on the teacher's part. But with the completion of vowels and consonants the children then had a good foundation for new word attack. This has followed throughout the course - thus, at this time of year all children are enjoying free reading. They have read many supplementary books. Evidence of their enjoyment is their voluntary choice to read in their spare moments.

In using the Basic Curriculum Series along with Phonetic Keys it was found that the children handled all the books with ease.

The work pages in the readers are not varied sufficiently - they are not challenging enough for the brighter child. Also suggestions for seatwork on the phonetic part could be included to advantage.

Of thirty-five children who began this course, thirty-three have now completed it satisfactorily - the other two, one boy, it was found could not hear the work on vowels and was transferred to another classroom; the other boy is at the Primer Level in the work.

School I - Grade II

After careful evaluation of the program Phonetic Keys to Reading, I feel it has been a most worthwhile course. The children are independent readers with marked power to attack new words.

Of my 33 children only one has blocked repeatedly at "sounding out" isolated words. Words given in context, however, present little, if any, difficulty.

Two boys have been helped tremendously by this method. Both experienced great difficulty in Grade I. They read at the primer level with difficulty in September. Both are now fluent readers.

Four others who had difficulty in Grade I, and were at the primer level in September, have made much slower progress but they, too, are now showing independence in reading. They are well along in "As Days Go By" and will complete it about the middle of May.

After completing Phonetic Keys the children are able to read Curriculum Foundation Readers with ease and enjoyment without previous word study.

I can say without hesitation that the children - even the slower ones - enjoy free reading.

Perhaps one of the weak spots in the course is the lack of exercises requiring a little more thought than those given.

I have enjoyed teaching the course which was very challenging to start with but soon became smoother. I learned a great deal from it and would be happy to teach it or a similar course again as I feel a phonetic approach to reading is most profitable.

The children are more independent readers. They have the ability to attack new words. There are very few interruptions during the silent reading as the children do not have to ask what words are.

Vocabulary drill is not necessary.

The children have a keener interest in library books. Here again the children do not require much assistance when confronted with new words (very few interruptions).

The bottom group are very slow, however, the frequent repetition of the phonetic principles in the reviews and the word analysis on the colored band help considerably.

Parents (of average and above-average children) are quite pleased with the reading. They are very interested in the reading program. They say the children are picking up the newspapers, magazines, etc., and are reading on their own.

I find the fluency in the reading is quite good in the average and above-average groups. It is also favorable in the bottom group.

I do not find much change in the reading comprehension.

Children move their lips during silent reading. As a result the majority are reading aloud.

I still find it impossible to complete a lesson a day with the bottom group. They still require assistance in recalling rules and applying them.

Children with speech problems still have difficulty in sounding words (even one syllable words).

School II - Grade II

Good Features:

1. The ability to attack words independently is very evident, even in the bottom group. Silent reading is uninterrupted and the interest in the continuity of the story is high throughout.
2. The organization of the program - i. e., phonetic analysis followed by free reading - permits time to review phonetic principles and allows more time to check on individual problems and to try to correct them.
3. There seems to be more confidence in reading, especially new material. More reading is done at home (average and above-average pupils); there is more eagerness to look at new words (bottom pupils). There seems to be more interest and encouragement on the part of the parents.

Unfavorable Features:

1. I do not see a marked change in the fluency or reading speed.
2. I do not see a change in the comprehension. A test was given recently to all Grade II classes in silent reading. Results show that the standing in the experimental group was on par with those of other classes. The weak pupils showed up equally throughout the four classes involved in the testing.

3. Reading in thought units seems to be slightly weaker in the low group. Perhaps there is too much attention given to having every word analyzed correctly.

4. In spite of more power to attack words independently, the very weak pupils need assistance in recalling rules applicable to the particular situation, hence regardless of method, the weak pupils still need help.

5. There does not seem to be a marked change in spelling. The children are perhaps more aware of the construction of the word, but English is not phonetic, hence drill still seems to be the only answer to continued correct spelling.

School III - Grade I

I have enjoyed teaching this very well-organized reading program from a very good manual. The presentation has not been easy, particularly to the middle and lower groups. As in any new method I'm sure the second year would be easier.

In the early stages, one thing that surprised me, was that the children did not seem to be confused by phonetic principles or by the letter that had two or more sounds.

When the first two books "Tag" and "Dot and Jim" were completed I felt that all groups were more independent in their word attack. The second and third groups read through the "Dick and Jane" book with little difficulty. Word drill wasn't necessary.

The slower children will attempt to analyze words on their own. They may take a long time to figure out an exercise but they will eventually work it out independently.

At the beginning of the second term my top group were quite eager to write their own little stories. They weren't afraid to attempt this because in their own way they could sound out the words they wanted to spell. These were done independently and were readable. Granted, the spelling wasn't correct but these were later reprinted correctly. At this same time, this group was very interested in bringing story books to read to the class. I felt that this story writing and extra reading took place at an earlier stage than with the Curriculum Series.

At the bottom of the class, two children are still experiencing difficulty with their sounds - these two also have trouble trying to remember a sight word.

It has been a pleasant change not having a set workbook for this program. I felt there was too much emphasis on "keys" such as the following:

1. Three sounds of "ear" - page 70 - "Dot and Jim"
2. Three sound of "ea" - page 92 - "Dot and Jim"
3. Ending "ed" three sounds - complicated work on voiced and voiceless consonants - page 59 - "Dot and Jim"
4. Vowels affected by "r" - or, ar, ir, ur, then exceptions when followed by "e" (fire, care, etc.) - pages 12 and 54 - "Dot and Jim"
5. Teaching the four sounds of "a" following "w", e.g., wake, wag, was, walk - page 18 - "Dot and Jim"
6. "o" - before ld - page 75 - "Dot and Jim"
   mb -
7. "i" - before ld - page 35 - "All Around"
   mb -
   nd -

8. Syllables: Too much detail on the above for the few words these "keys" helped unlock for their reading.

I think more phonics could be used along with the Basic Curriculum Series. After having done this course with the phonics I would prefer not to revert completely to the Basic Curriculum Series.

School III - Grade II

My impressions of the Phonetic Keys to Reading was most favorable. The top class encountered no difficulties in learning to read under the method, but I do believe they would have done equally well in any program.

The second and third groups needed the extra phonics, therefore it was most valuable to them as they have learned to analyze new words more quickly and unless children can attack words independently they will not attempt to read books or stories with which they are unfamiliar.

We are now reading the Curriculum Foundation Series and Ginn's revised edition of "Around the Corner." There is little or no time spent on word drill.

With more stress on phonics I believe the Curriculum Foundation Series method of teaching could be just as effective.

Although I am a great believer of teaching phonics there are some principles and rules that could be omitted and treat the words as sight words.

e.g. climb - limb
comb - bomb - tomb
Key 14 - the vowel "i" is usually long when it immediately precedes ld, mb, or nd - but - wǐnd
Also, Key 7 - when "o" precedes ld or mb

Another phonic sound I felt was useless to the children was the sound of "or"

e.g. ôr as in for
ōr as in more
(Not enough distinction in sound.)

I find little value in stressing accents. Syllabification, I think, is perhaps not too important at this grade level.

In conclusion, I would like to stress that the method of teaching reading for comprehension by the Phonetic Keys to Reading was of value to have the comprehension exercises immediately following the stories, to be done as soon as the story was read. Although there are very valuable pages in the workbook for the Curriculum Foundation Series I prefer not to have to adhere so rigidly to one.

Additional Schools (uncontrolled)

School A - Grade I

I have enjoyed teaching this method. I feel that some of the phonetic principles taught in Grade I could be left until Grade II. This would give more time for mastery of those taught, and would not limit the children's reading.

I have found that the children are absolutely fearless about tackling new words. They seem to expect to be able to read almost anything.

I think this is an excellent program but too extensive as it now stands.

School A - Grade II

I am looking forward to carrying on the Phonetic Keys program in Grade III.

This program has much to recommend it but I feel it covers too much ground all at once. Some of the work of this grade could be grasped more easily by the more mature children of Grade III.

The children seem to have enjoyed the program. They have great confidence in their reading ability and are never afraid to try a brand new word.

School C - Grade I

I found that the majority of my class were able to read at a much higher level.

Out of thirty children, sixteen were able to read a Grade II, level I, book fluently and were able to sound out any words quickly and without any help.

My middle group, which consisted of ten, were able to sound out the words they encountered but some of this group were not reading fluently.

The bottom group had to be helped in some instances in sounding out words of more than one syllable.

I gave them spelling and found that more children were able to get the words correct. There were no combination of letters which did not make sense, except with one child.

The one drawback, I felt, was the comprehension skills were not as good, in fact they were poor in some cases, as the children taking the Dick and Jane series.

The exercises in the phonetic series were not the type to get the children thinking.

This was noted especially when they were given the same test as the other Grade I classes. They lost marks on questions such as story sequence which was not taken in the phonetic keys. There were also different types of questions.

School C - Grade II

I have enjoyed teaching by the Phonetic Keys to Reading method. I have a group of thirty-three children graded from C to D. I believe that they were able to attack new words and become independent readers much earlier in the year than would have been possible without the early introduction of the vowel sounds.

The end result may not be a great deal different but they have enjoyed being able to read and sound words independently by the middle of the year.

School D - Grade I

I have greatly enjoyed teaching Phonetic Keys to my grade I class, and I am sure the children have enjoyed it too. At first I was leery of the idea, but now I am happy because I feel the children have gained from their experience and have a good foundation with which to continue their education.

The children have a keen interest in reading. Library books are read and enjoyed by the children without the teacher having to tell them each new word. I liked this independence that the children had, and they had confidence in themselves to try and read everything.

The children particularly enjoyed spelling. This made them so happy because they could write sentences and stories. The children had more power in attacking new words and in spelling than my class did last year.

I found that the language in my class was better developed using the Phonetic Keys. The children learned more new words from the color bands and their creative writing improved. The children enjoyed writing stories and would quickly spell the word as it sounds. I think the children really enjoyed this.

I feel this course may be quite heavy for a slow class because there are so many new and different concepts to learn. On the whole I felt the stories were more interesting and mature than the stories in Dick and Jane. However, sometimes I felt the stories were too long; we couldn't finish the reading of them in one lesson.

The children didn't like it when there were too many color band words to sound. When we had to stop and sound color bands the children's interest in the story was definitely lessened, and they didn't enjoy this. I feel if there were fewer words to sound it would be better.

All the emphasis in the readers was on the phonics. I feel there should be more emphasis on comprehension. There are no exercises on sequence or any on making inferences.

I really enjoyed Phonetic Keys. With my class I think it has helped them and given them a good foundation. The children enjoyed it too. They are very pleased with themselves and the things they can do.

School D - Grade II

I have enjoyed teaching this program to my Grade II class. The stories are much more interesting to the children than those found in Friends and Neighbours. I feel, though, that there are too many new words to be sounded before each story. The class quickly loses interest in this. Some of the stories are quite long and have to be taken in two lessons.

The exercises at the ends of the stories are good, but there are not enough of the type to test comprehension or to teach making inferences. More exercises could be given on sequence of events, also.

I found the phonics helped the children in learning to spell and in their language program. They were able to sound their words easily in any subject and are able to write stories fluently with a minimum of spelling errors.

School F - Grade I

The final results indicate that all children in this class made good reading progress, even though some students found a few lessons difficult to assimilate.

The marked reduction in workbook exercises provided more pupil reading practice as well as added teaching time.

Upon completion of each reading stage, other books at the same level could be used before beginning the next step in the program. Youngsters enjoyed the satisfying experience of being able to read.

Group I read:
Tag - Phonetic Keys to Reading
Dot and Jim - Phonetic Keys to Reading
All Around With Dot and Jim - Phonetic Keys to Reading
We Look and See
We Work and Play
We Come and Go
My Little Red Story Book
My Little Green Story Book
My Little Blue Story Book
Fun With Dick and Jane
Our New Friends
Fun in Story
I Know a Secret
Down Our Street
The Christmas Tree
We Three

Group II read:
Tag - Phonetic Keys to Reading
Dot and Jim - Phonetic Keys to Reading
All Around With Dot and Jim - Phonetic Keys to Reading
We Look and See
We Work and Play
We Come and Go
My Little Red Story Book
My Little Green Story Book
My Little Blue Story Book
Fun With Dick and Jane
Our New Friends
The Green Book
The Blue Book
Fun in Story
I Know a Secret
Down Our Street
Downy Duck Grows Up
The Wishing Well
Our School
We Three

Group III read:
Tag - Phonetic Keys to Reading
Dot and Jim - Phonetic Keys to Reading
All Around With Dot and Jim - Phonetic Keys to Reading
We Look and See
We Work and Play
We Come and Go
Fun With Dick and Jane
Our New Friends
We Three

This group was slower and needed more time to read the authorized texts, and therefore had less time for extra reading.

School F - Grade II

This class has made very good progress, and no pupil will be required to continue in the grade. Their interest in reading is high and they wanted to read more and more each day.

Group I read:
Tag - Grade I in Phonetic Keys to Reading
Through Happy Hours - Grade II in Phonetic Keys to Reading
As Days Go By - Grade II in Phonetic Keys to Reading
Friends and Neighbours
More Friends and Neighbours
Hello David
What Next
Ranches and Rainbows
A Garden of Stories
Group II has read all the above except "A Garden of Stories".

Group III has read:
Tag - Phonetic Keys to Reading
Through Happy Hours - Phonetic Keys to Reading
As Days Go By - Phonetic Keys to Reading
Friends and Neighbours Jim and Judy
More Friends and Neighbours What Next (Part One)

I feel the pupils have been challenged to do their best and were able to enjoy reading the books at this level. They also developed an interest in reading the library books on social studies and science.

School G - Grade I

In "Tag" (auditory section) - if groups are to be only two stories behind each other, it would be advisable not to group except for drill until the pre-primer section. The bottom group is bored with stories which are supposed to hold their interest. Phonetic Keys does make pupils more independent. They are able to attack new material. Recommend separate workbook and separate reader.

School G - Grade II

Since this year's Grade II's have not been introduced to the Phonetic Keys program in Grade I there is too much "new ground" to be covered in too short a time - that is for a poor B level group. This group also has too many sight words to learn; words that should have been learned in Grade I. A better B level group is greatly helped by Phonetic Keys and finds the stories interesting and enjoyable.

The books are too clumsy. It would be better if they were bound and smaller in size. Workbook section should be in a different book.

The lessons are too long for a slow group. Either lessons should be shorter or one should not have to take a lesson a day.

School I - Grade I

Completed the Grade I program at the end of April, so we have had lots of time for review and doing extra reading during the last two months. Every child in the class is keenly interested in reading library books.

The children in my class are very young and immature. Most of them will not be seven years old until the fall. On the Harrison-Stroud Reading Readiness test given in June 1962 they all rated types four and five. They were given the Gates Primary Reading test in June 1963 and the scores ranged from grade 2.5 to 3.8.

In the two years that I have been teaching Grade I, I have found the Phonetic Keys program much more satisfactory than the other program. I had the same type of class last year also.

The first six weeks of the course was very difficult to teach to my third group, as they showed so little interest. Short vowel sounds were difficult for them and they had difficulty from day to day remembering the consonants by sight and by sound. "Bumping" was very slow. By the end of October the children were doing spelling and writing little stories, i.e., "Pretend you are Dot, Jim, Tag, etc."

Now the stories are so natural about families, pets, etc. They write their own little stories for social studies and science.

I would be very happy to see this program continued in the primary grades. It is especially beneficial in the slower classes.

I have had some unusual examples of spelling at times, i. e., "cyout" and "coghst".

1. My little brother is two months old. He is very cyout.
2. Our house coghst a thousand dollars.

School I - Grade I and II

We have enjoyed the Phonetic Key program.

It was difficult at the beginning but once "Tag" had been completed, interest increased and the children began to read with enthusiasm.

What delighted me the most was the fact that we were not limited to vocabulary. I could introduce any new word or supplementary reader (within reason) and the children would use the phonetic skills to attack it.

We learned to spell almost as quickly as we read the words. We covered the Grade II speller as well as many similar words from the reader and everyday work. Thus the class as a whole were able to print many short stories during the year.

The Phonetic Key program was supplemented with the regular readers plus numerous supplementaries.

The only lack I felt was in the "follow up". It was difficult to make enough seat work to replace a workbook. They did not get enough practice in following printed instructions and working independently.

This is, in the main, a top class - some accelerating - so the Grade I Gates Primary Reading test does not give a true picture of their reading ability. The top half of the class were not being challenged. They completed the test in much less than the allotted time. There were errors of course but due to carelessness rather than lack of ability or understanding.

At this stage (June), I cannot honestly say whether this class is any better at reading than a comparable one I had two years ago under the other system. However, I do feel that with more stress on phonetic skills and an earlier presentation, the children have the tool to start independent reading earlier and gain the sense of achievement.

I endorse the Phonetic Keys program.

After sixteen years of "Dick and Jane" it has given me a new lease on life.

School I - Grade II and III

Grade II took "Tag" 1^1 and the two second grade books. Grade III took the third grade course as well.

I found that teaching the program was quite enjoyable, and I feel that its main advantage was the extra tool it gave the children for independent reading.

The phonetic part of the program is well-planned, very systematic and easy to follow. The stories are, I think, mediocre from the literary point of view - there were perhaps one or two in each book that were of any value at all for discussion. Comprehension exercises were found to be most inadequate.

The Grade III program did not really develop any new skills, only expanded on the old ones. Toward the end of the course, we found ourselves spending almost all of our time discussing words that were completely beyond the pupils' usage vocabulary. This type of work would be more useful if the words were given in context, or in dictionary exercises. The stories in Grade III were slightly better than the others.

The following are my main impressions:

1. The phonetic part of the program is very valuable. It has given my class a basic for word recognition that will be useful to them for many years.
2. Extra comprehension work is absolutely essential, even for good classes. The use of another workbook would be a great help.
3. When accelerating, it might be better to leave out at least one of the Phonetic Keys books. They would still cover the whole course, but there would be more time for discussion of stories that have greater literary value, for development of comprehension skills, oral reading, etc.

In conclusion, I should like to state that the course to me, has seemed very valuable. I should like to go on using it.

School J - Grade I

The final results of the "Phonetic Keys to Reading" program have been more rewarding than with the Basic Foundation Series.

The children had more power and after the last book "All Around" was finished, they had no trouble with "Our New Friends", "We Three", or the other supplementary readers read.

In assessing the value of the program, I found that most of the children enjoyed reading, were improved spellers and were capable of writing short paragraphs without too much help in spelling.

The listening and sounding activities provided in first two books were great aids in developing these skills.

School J - Grade II

The final results of the Phonetic Keys to Reading program were gratifying. The children have more skills for word attack and a greater degree of independence in reading and spelling.

Grade I children find the course confusing and frustrating - introduced as it is at the very beginning of Grade I. Perhaps it would be more meaningful and effective if it were introduced after some auditory and visual training work had been done - particularly for slower children.

The Grade II course is a complete review of Grade I and the children found it easier and more comprehensive. There was an improvement in both oral and silent reading in Grade II. Spelling skills were also greatly improved. Spelling should be considered when assessing the value of the program.

Generally speaking, the course has been very helpful to grade I and II students.

School K - Grade I

I enjoy teaching the new reading program. I found the prepared lessons helpful and easy to follow. The children were able to apply the rules to sound out new words very quickly. All the children are now able to pick up any book at their reading level and read it without difficulty.

Even though I found the rules easy to teach, I think that some of them were too detailed, e.g., "es" or "s" has 3 different sounds. I feel that all the rules were not necessary in order to teach small children how to read. At the beginning of the course, we dealt mainly with sounds and new rules thus leaving less time for oral reading.

School K - Grade II

I have very much enjoyed teaching phonetic keys to my Grade II class. By closely following the lesson plans in the Teacher's Manual and with the help of the material supplied, I was able to bring the children along quite quickly and their progress was good throughout the year.

I might say that in my opinion the program seems to attempt to make the English language phonetic by a too great number of "keys". I doubt that all these keys are necessary in teaching a Grade II child to read well.

School L - Grade I

The phonics approach to reading is a challenging course for average and above-average children. I think it enables them to read and enjoy independent supplementary materials much earlier in the year. The brighter children fou the rapid introduction of sounds and principles stimulating, but the course cou be moderated for slower children.

School L - Grade I

Phonetic Keys method develops independent reading on a high level amon average and above-average pupils. Slower children cannot retain the vast amount of knowledge taught at this fast pace. If allowed to take the course more slowly they gain a great deal of reading power and independence.

School L - Grade II

The phonics approach to reading is very challenging and most unique. I found it imaginative and conducive to creative teaching. If, at the grade two level, the control groups of children scored as well as the experimental group I am suspicious that the control group had instruction far beyond their prescribed course, i.e., beyond the Guide Book instructions.

School L - Grade II

I have used Phonetic Keys to Reading with a relatively good class this past year. It was interesting and enlightening to me. However, personally I would prefer an integrated course, using both Curriculum Foundation Method and Phonetic Keys.

School H - Grade I

Basic Reading program was taught to a D class and Phonetic Keys to an A class. I felt that the Phonetic Keys taught the children a great deal more, in every aspect of the reading skills, than did the prescribed program. I was very pleased.

School H - Grade II

My only experience with Grade II reading was with the Phonetic Keys program. My class was an A class. I found that the children became very fluent in oral reading. They mastered all the skills taught and the interest was always high.

I do feel, however, that the Phonetic Keys should have provided for more work on comprehension, either in the same or in another book.

However, I enjoyed teaching the Phonetic Keys and look forward to teaching it again in September 1963.

THE WINNIPEG SCHOOL DIVISION NO. 1
Superintendent's Department

Research Report 8/64 September 29, 1964.

Bureau of Tests and Measurements

Progress Report on Phonetic Keys to Reading Experiment

This is a progress report covering the work completed in the Phonetic Keys to Reading Experiment in 1964. This is the second year of the three-year experiment that was initiated in 1962-63 to study and evaluate the results obtained when reading is taught by the phonetic and eclectic methods in grade I.

In May, 1964, the Gates primary reading tests, types PWR (primary word recognition), PSR (primary sentence reading), and PPR (primary paragraph reading), were administered to grade I pupils in experimental and control classes in three Winnipeg schools that were specially chosen for the experiment. Grade 2 pupils who were in grade I in 1963 were tested with Gates advanced primary reading tests, type AWR (advanced word recognition) and APR (advanced paragraph reading). Grade 3 pupils were given the Gates basic reading test, types LC (level of comprehension) and RV (reading vocabulary). The LC test contains 26 passages arranged in order of difficulty and is designed to measure complexity and difficulty of the material the pupils can read. The RV test contains 65 items arranged in order of difficulty and measures the range of the pupils' effective reading vocabulary. In effect, the LC and RV tests can be regarded as measuring the end products of the results of teaching by the phonetic and eclectic methods. The experiment was broadened in 1964 to test the effect that the two methods of teaching reading might have on the spelling skills in grades 2 and 3.

Part A of this report outlines the 1964 results for the three "controlled" experimental schools, designated as School I, School II, and School III where experimental and control classes have been carefully equated for reading ability and mental ability. Part B contains an analysis of the scores of all the pupils who started the experiment two years earlier, and who at the end of 1963 had completed grade 3. The data for these pupils were analyzed by a computer programmed for a discriminant function analysis. Part C covers the results obtained in 12 experimental and 12 control schools in a supplementary experiment in which the pupils were not matched or grouped to control variability.

Table 1

Summary of Average Test Scores by Grade in Three Winnipeg Schools -- May, 1964

School	Grade	Sex	Type of Test	Average Scores		Difference in Favour of	
				Experimental	Control	Experimental	Control
I	1	B+G	PWR	45.26	39.35	5.19**	
	1	B+G	PSR	36.77	34.64	2.13	
	1	B+G	PPR	22.23	20.68	1.55	
	2	B	AWR	39.85	37.42	2.43	
	2	G	AWR	38.14	36.14	2.00	
	2	B	APR	20.86	24.14		3.28
	2	G	APR	20.14	22.00		1.86
	3	B	LC	25.50	26.00		0.50
	3	G	LC	25.16	26.33		1.17
	3	B	RV	22.00	29.15		7.15**
	3	G	RV	20.08	19.17	0.91	
II	1	B+G	PWR	40.78	36.56	4.22**	
	1	B+G	PSR	30.30	30.70		0.40
	1	B+G	PPR	20.09	18.52	1.57	
	2	B	AWR	37.00	34.77	2.23	
	2	G	AWR	38.20	37.30	0.90	
	2	B	APR	22.00	19.66	2.34	
	2	G	APR	20.40	21.80		1.40
	3	B	LC	20.07	22.07		2.00
	3	G	LC	20.00	21.30		1.30
	3	B	RV	29.69	28.84	0.85	
	3	G	RV	27.20	26.20	1.00	
III	1	B+G	PWR	41.70	33.78	7.92**	
	1	B+G	PSR	34.43	26.53	7.90**	
	1	B+G	PPR	20.60	17.66	2.94	
	2	B	AWR	40.15	34.15	6.00*	
	2	G	AWR	39.11	34.33	4.78	
	2	B	APR	23.46	18.76	4.70*	
	2	G	APR	23.33	22.44	0.89	
	3	B	LC	23.55	26.00		2.45
	3	G	LC	22.69	22.38	0.31	
	3	B	RV	34.33	33.11	1.22	
	3	G	RV	30.84	27.92	2.92	

RV = Reading Vocabulary
PWR = Primary Word Recognition
PSR = Primary Sentence Reading
PPR = Primary Paragraph Reading
AWR = Advanced Word Recognition
APR = Advanced Paragraph Reading
LC = Level of Comprehension

* Significant at 5 per cent level
** Significant at 1 per cent level

PART A

Table I outlines the results obtained when Gates reading tests were administered to grade I, 2, and 3 pupils in each of the three "controlled" experimental schools in May, 1964. An analysis of variance as outlined by Garrett (1) was carried out on each of the tests to produce F-values. Significance at the 5 per cent level means that there is one chance in 19 of the difference being due to chance and at the 1 per cent level one in 99. The F-test and the t-test give exactly the same results when two means are compared as $T = \sqrt{F}$.

The data in Table 1 show that at the grade one level there is a highly significant (1 per cent level) difference in favour of the phonetic method for Schools I and III, and a significant difference (5 per cent level) also favouring the phonetic method, for School II for primary word recognition (PWR). There is a significant difference (5 per cent level) favouring the phonetic method in grade I at School III for sentence reading when the boys' and girls' scores are combined in the 1964 testing. However, this trend is not evident at either School I or School II. Grade two boys taught by the phonetic (experimental) method at School III had significantly better scores for advanced word recognition (AWR) and advanced paragraph reading (APR) than did the control group taught by the eclectic method. However, this trend for higher scores for the experimental group over the control group cannot be confirmed at either School I or School II for AWR and APR. In grade three, the control group of boys scored significantly higher than the experimental group for reading vocabulary at School I.

To determine whether there is a significant difference between the two methods of teaching reading from the overall point of view, the data for each of the reading variables have been combined for the three schools in the "controlled" experiment. Table 2 gives a summary of the average scores for all pupils in experimental and control groups.

Table 2 Summary of Average Combined Reading Scores In Grade I for Three Schools, May 1964

Type of Reading	Average Scores		Difference
	Experimental	Control	
PWR	42.76	36.53	6.23**
PSR	34.17	30.58	3.59**
PPR	21.07	18.96	2.11**

The differences in favour of the experimental (phonetic) method are highly significant as shown by the analysis of variance for each variable and outlined in Tables 3, 4 and 5.

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(1) Garrett, Henry E., Statistics in Psychology and Education. David McKay Co. Inc., May, 1962.

Table 3 Analysis of Variance of Primary Word Recognition (PWR) Scores -- Grade I

Source of Variation	Degree of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	1684.89	1684.89	27.09
Within Group	172	10698.33	62.20	
Total	173	12383.22		

F.05 1,172 d.f = 3.90
F.01 1,172 d.f = 6.79

The F-value of 27.09 is greater than the value of 6.79 required for significance at the 1 per cent level and indicates a very significant difference between the two means for primary word recognition (PWR) in grade I.

Table 4 Analysis of Variance of Primary Sentence Reading (PSR) Scores -- Grade I

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares (Variance)	F-Value
Between Means	1	559.62	559.62	7.01
Within Groups	172	13723.63	79.79	
Total	173	14283.25		

F.05 1,172 d.f = 3.90
F.01 1,172 d.f = 6.79

The F-value of 7.01 is greater than the value of 6.79 required for significance at the 1 per cent level and indicates a highly significant difference between the two means for primary sentence reading (PSR) in grade I.

Table 5 Analysis of Variance of Primary Paragraph Reading (PPR) Scores -- Grade I

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	193.46	193.46	8.32
Within Groups	171	3975.40	23.25	
Total	172	4168.86		

F.05 1,171 d.f = 3.90
F.01 1,171 d.f = 6.79

The F-value of 8.32 is greater than the value of 6.79 required for significance at the 1 per cent level and indicates a highly significant difference between the two means for primary paragraph reading in grade I.

A similar procedure has been followed to analyze the data for advanced word recognition (AWR) and advanced paragraph reading (APR) in grade 2. Table 6 gives a summary of the average scores for the three experimental schools.

Table 6 Summary of Average Combined Reading Scores in Grade II -- For Three Schools, May 1964

Type of Reading	Average Scores Experimental	 Control	Difference
AWR	38.82	36.88	1.94**
APR	21.89	21.16	0.73

There is a highly significant difference favouring the experimental (phonetic) method for advanced word recognition (AWR) in Grade 2. However, there is no difference between the two methods for advanced paragraph reading (APR) in Grade 2.

The data for each of the reading variables were analyzed by the analysis of variance method as outlined in Tables 7 and 8.

Table 7 Analysis of Variance of Advanced Word Recognition (AWR) Scores - - Grade II

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	102.65	102.65	19.55
Within Groups	106	556.27	5.25	
Total	107	658.92		

F.05 1,106 d.f = 3.94
F.01 1,106 d.f = 6.90

The F-value of 19.55 is greater than the value of 6.90 required for significance at the 1 per cent level and indicates a highly significant difference between the two means for advanced word recognition (AWR) in Grade 2.

Table 8 Analysis of Variance of Advanced Paragraph Reading (APR) -- Grade II

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	14.54	14.54	0.67
Within Groups	108	2340.88	21.67	
Total	109	2355.42		

F.05 1,108 d.f = 3.94
F.01 1,108 d.f = 6.90

The F-value of 0.67 is less than the value of 3.94 required for significance at the 5 per cent level and indicates that there is no significant difference between the two methods for advanced reading in grade 2.

In grade 3, two tests were given to determine the level of comprehension (LC) and reading vocabulary (RV). Table 9 gives the average scores for each of the reading variables, LC and RV in grade 3.

Table 9 Summary of Average Combined Reading in Grade III for Three Schools, May 1964

Type of Reading	Average Scores		Difference
	Experimental	Control	
LC	22.49	23.69	1.20
RV	27.82	26.97	0.85

There is no significant difference between the two methods for level of comprehension and reading vocabulary in grade 3.

The data were analyzed by the analysis of variance method as outlined in Tables 10 and 11.

Table 10 Analysis of Variance of Level of Comprehension (LC) Scores -- Grade III

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	43.67	43.67	0.74
Within Groups	120	7102.34	59.18	
Total	121	7146.01		

F.05 1,120 d.f = 3.92
F.01 1,120 d.f = 6.84

The F-value of 0.74 is less than the required value of 3.92 for significance at the 5 per cent level and indicates that there is no significant difference between the two means for level of comprehension (LC) in grade 3.

Table 11 Analysis of Variance of Reading Vocabulary (RV) Scores -- Grade III

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	22.16	22.16	0.35
Within Groups	120	7604.96	63.37	
Total	121	7627.12		

F.05 1,120 d.f = 3.92
F.01 1,120 d.f = 6.84

The F value of 0.35 is less than the required value of 3.92 required for significance at the 5 per cent level and indicates that there is no significant difference between the two methods for reading vocabulary in grade 3.

The 1964 results show that the phonetic method of teaching reading is significantly better than the eclectic method at the 1 per cent level for primary word recognition (PWR), primary sentence reading (PSR), and primary paragraph reading (PPR) in grade 1. In grade 2, the phonetic method produced significantly better results at the 1 per cent level for advanced word recognition (AWR), but there was no difference between the two methods for advanced word paragraph reading (APR). In grade 3, there was no significant difference between the two methods at the 5 per cent level of probability.

The hypothesis has been postulated that the phonetic method may have some effect upon spelling skills. To test this hypothesis, the phonetic keys to reading experiment was broadened to include a spelling test for each of the three schools for grades 2 and 3 in May, 1964. Table 12 is a summary of the average spelling scores for the spelling test.

Table 12 Summary of Average Spelling Scores by Grade In Three Winnipeg Schools -- May, 1964

			Average Scores		Difference in Favour of	
School	Grade	Sex	Experimental	Control	Experimental	Control
I	2	B	27.57	28.00		0.43
	2	G	27.71	27.14	0.57	
	3	B	29.25	30.75		1.50
	3	G	32.58	34.25		1.67
II	2	B	29.09	28.54	0.55	
	2	G	29.90	28.80	1.10	
	3	B	35.53	36.76		1.23
	3	G	37.80	37.00	0.80	
III	2	B	28.23	25.46	2.77	
	2	G	28.00	27.22	0.78	
	3	B	36.66	35.55	1.11	
	3	G	37.61	36.84	0.77	

There is no significant difference between any two means in either grade 2 or 3, or between boys and girls in Table 12. This indicates that the effect on spelling skills of either method of teaching reading is not significant at the 5 per cent level of probability. These results support research by Morgan and Light (3) who have reported that the use of Phonetic Keys To Reading materials do not produce superior spellers.

In 1963, the Board committee on articulated phonics requested information regarding the total reading ability of pupils in both the experimental and control groups. Total reading ability in grade 2 is considered to be the combined score for advanced word recognition (AWR) and advanced paragraph reading (APR). For grade 3 total reading ability is computed in a similar fashion by combining the level of comprehension (LC) score with the reading vocabulary (RV) score.

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(3) Morgan, Elmer F. and Light, M. A Statistical Evaluation of Two Programs of Reading Instruction. Journal of Educational Research, Volume 57, Number 2, October, 1963.

Percentile scores have been computed for total reading ability for experimental and control groups and are recorded in Table 13 and 14.

Table 13

Summary of Total Reading Scores (Combined for Three Schools)
Grade II -- May, 1964

Percentile Level	Experimental Groups		Control Groups	
	Boys (N=29)	Girls (N=26)	Boys (N=29)	Girls (N=26)
90	72.2	72.0	71.6	71.9
80	68.8	70.2	68.2	69.4
75 (Q_3)	68.2	69.2	65.8	68.6
70	67.7	68.4	64.1	67.8
60	66.6	66.8	62.5	67.2
50 (mdn.)	65.5	65.1	60.9	64.5
40	64.0	62.5	58.8	61.2
30	60.4	59.2	54.0	54.3
25 (Q_1)	58.6	57.6	51.6	53.0
20	56.8	56.0	49.0	51.7
10	53.1	52.2	39.7	47.5

The percentile scores in Table 13 are generally higher for the experimental group than for the control group for grade 2. There is a smaller difference between the experimental and control groups for the girls than for the boys.

Table 14

Summary of Total Reading Scores (Combined For Three Schools)
Grade III -- May, 1964

Percentile Level	Experimental Groups		Control Groups	
	Boys (N=26)	Girls (N=35)	Boys (N=26)	Girls (N=35)
90	68.0	64.0	73.0	63.2
80	62.5	60.5	67.5	60.3
75 (Q_3)	60.3	58.8	65.3	55.8
70	58.5	57.0	62.5	53.6
60	55.2	53.2	57.8	51.4
50 (mdn.)	51.2	48.7	54.5	49.0
40	47.5	43.2	50.2	45.5
30	44.2	39.0	48.0	40.3
25 (Q_1)	42.6	37.2	45.1	37.4
20	41.0	35.5	42.5	34.5
10	37.2	31.4	36.0	30.1

The percentile scores in Table 14 for the boys' control group are higher than those in the boys' experimental group. The difference between the percentile scores for the girls is relatively small.

Table 15 outlines the average grade scores for the experimental and control classes in each of the "controlled" experimental schools for grades 1, 2, and 3 for 1962, 1963, and 1964. The scores for the same pupils have been compared for the three year period.

Table 15 Average Grade Score by School, Grade, and Years

School	Year	Average Grade Scores					
		Experimental Group Grades			Control Group Grades		
		1	2	3	1	2	3
	1962	2.6			2.5		
I	1963		3.9			4.1	
	1964			4.9			5.1
	1962	2.6			2.5		
II	1963		3.9			4.1	
	1964			4.9			5.1
	1962	2.9			2.9		
III	1963		4.4			4.5	
	1964			5.7			5.6
Average		2.7	4.1	5.2	2.6	4.2	5.3
Gain			1.4	1.1		1.6	1.1

The data in Table 15 show that the difference between the average grade scores for the experimental and control groups is relatively small. The amount of gain in grade 2 is slightly greater than that obtained in grade 3.

Conclusions -- Part A

1. The 1964 results of the phonetic keys to reading experiment show that in grade I the phonetic method of teaching reading produces results that are significantly higher at the 1 per cent level than the eclectic method for primary word recognition (PWR), primary sentence reading (PSR), and primary paragraph reading (PPR).

2. In grade 2 there is a statistically significant difference at the 1 per cent level favouring the phonetic method for advanced word recognition (AWR), but no statistical difference between the two methods for advanced paragraph reading (APR).

3. In grade 3, there is no statistically significant difference between the two methods of teaching reading when level of comprehension (LC) and reading vocabulary (RV) are used as criteria.

4. Under the conditions of this experiment there is no statistically significant difference upon spelling skills in grades 2 and 3 between the two methods of teaching reading.

5. The results outlined in Part A of this report support other research findings which generally show that the phonetic approach to teaching reading yields higher reading scores than does the eclectic program in grades 1 and 2, but that this apparent difference is not maintained through grade 3.

PART B

Discriminant Function Analysis of Phonetic Keys to Reading Experiment

It is sometimes possible to make a decision on the basis of a single variable but more often two groups (experimental and control) differ in several variables as is the case in the Phonetic Keys to Reading Experiment. Goulden (2) discusses this problem and outlines a solution to the problem by the use of a discriminant function analysis.

Records have been compiled for a sample of 153 pupils who completed grade 3 at the end of June, 1964. These pupils are from the three experimental schools that were chosen to take part in the Phonetic Keys to Reading program.

The data for the 153 pupils, covering nine reading variables as outlined below, have been recorded on punched cards and processed through a 1620 computer which was programmed for a discriminant function analysis.

List of Variables -- Phonetic Keys To Reading Experiment

X_1= Intelligence Rating Score -- Pintner) Kindergarten
X_2= Gates Test Score)

X_3= Primary Sentence Reading PSR) Grade I
X_4= Primary Paragraph Reading PPR)

X_5= Advanced Word Recognition AWR) Grade II
X_6= Advanced Paragraph Reading APR)

X_7= Level of Comprehension LC)
X_8= Reading Vocabulary RV) Grade III
X_9= Spelling)

Table 16 outlines the average scores for each of the nine variables:

Table 16 Average Scores For Nine Variables

Reading Variable	Experimental (N=75)	Control (N=78)	Difference
X1	48.35	48.36	.01
X2	43.99	44.42	.43
X3	26.19	26.85	.66
X4	18.17	17.88	.29
X5	33.05	33.82	.77
X6	21.27	22.26	.99
X7	26.88	27.08	.20
X8	22.59	23.56	.97
X9	35.59	35.60	.01

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(2) Goulden, C.H., Methods of Statistical Analysis -- 2nd Edition. John Wiley and Sons, 1952.

Table 17, analysis of variance, shows that there is no significant difference between the two means:

Table 17 Analysis of Variance

Source of Variation	Degrees of Freedom	Mean Square (Variance)	F-Value
Between Means	9	.1276	0.49
Error	143	.2594	
Total	152		

F.05 9,143 d.f=1.94
F.01 9,143 d.f=2.53

The F-value of 0.49 is less than the value of 1.94 required for significance at the 5 per cent level and indicates that the difference between the average scores is not significant.

Conclusion

On the basis of a discriminant function analysis of the data collected for 153 pupils in three Winnipeg Schools, there appears to be no significant difference between the phonetic method and the eclectic method at the end of grade 3.

PART C

Report On The Use Of Phonetic Keys To Reading Program And The Regular Reading Program In Several Other Classrooms.

Part C of this report contains the 1964 results of the phonetic keys to reading program which was used in 24 unselected classes in 24 schools. For purposes of this report the schools using the Phonetic Keys to Reading have been labelled, 'Experimental" and those using the eclectic program "Control". It must be remembered that the pupils have not been paired and grouped in any way to minimize variability. During the year some pupils of lower academic ability had to be removed from the experimental classes in two schools because their progress in reading was entirely unsatisfactory. It is difficult to say how much this fact may have influenced the results. When setting up classes for 1964-65, care has been exercised to exclude any pupils whose ability seems limited.

It is pointed out, therefore, that the following data are presented for information only. No suggestion is made that any credence can be placed in the results because classes and teachers were not paired or equated in any way.

The data were analyzed using the analysis of variance method as outlined by Garrett.

Table 18 contains the average scores for each of the three tests given to grade I pupils.

Table 18 Summary Of Average Test Scores For Grade I Pupils In Winnipeg Schools -- May, 1964

School	Type of Test	Average Scores		Difference in Favour of	
		Experimental (E)	Control (C)	Experimental	Control
EP	PWR	44.28	21.39	22.89**	
CR	PSR	31.32	17.48	13.84**	
	PPR	21.03	15.12	5.91**	
EM	PWR	42.13	34.45	7.68**	
CO	PSR	36.88	28.12	8.76**	
	PPR	20.69	17.80	2.89	
EV	PWR	39.90	26.36	13.54**	
CG	PSR	31.00	22.30	8.70**	
	PPR	18.59	15.80	2.79*	
ES	PWR	45.08	38.05	7.03**	
CT	PSR	33.61	32.24	1.37	
	PPR	21.96	21.50	0.46	
EJ	PWR	46.54	38.52	8.02*	
CH	PSR	36.82	31.12	5.70*	
	PPR	23.86	18.16	5.70**	
EL	PWR	44.22	29.87	14.35**	
CD	PSR	36.56	23.03	13.53**	
	PPR	22.81	13.65	9.16**	
EI	PWR	41.14	33.59	7.55**	
CU	PSR	29.43	31.78		2.35
	PPR	19.96	20.09		0.13
EE	PWR	42.11	30.71	11.40**	
CN	PSR	33.89	25.94	7.95**	
	PPR	20.74	16.87	3.87**	
EW	PWR	41.58	26.32	15.26**	
CF	PSR	33.40	22.36	11.04**	
	PPR	20.33	14.55	5.78**	
EA	PWR	40.03	39.56	0.47	
CB	PSR	26.15	33.16		7.01*
	PPR	17.38	21.31		3.93*
EK	PWR	42.16	40.46	1.70	
CQ	PSR	37.36	33.43	3.93	
	PPR	22.72	21.32	1.40	
EX	PWR	41.61	33.95	7.66**	
CC	PSR	29.65	27.60	2.05	
	PPR	21.04	19.07	1.97*	

The data outlined in Table 16 shows a highly significant difference in favour of the experimental (phonetic) method for 9 of the 12 experimental schools for primary word recognition (PWR). Significant differences in favour of the experimental (phonetic) method over the control (eclectic) method are noted for primary sentence reading (PSR) and primary paragraph reading (PPR) for 8 of the 12 groups. The results of the group of 12 schools, where no grouping of students was done, indicate that the phonetic methods has an advantage over the eclectic method in grade I.

The data for primary word recognition (PWR), primary sentence reading (PSR), and primary paragraph reading (PPR) have been combined for 12 experimental and 12 control schools to determine whether a difference between the two methods can be established. Table 19 is a summary of the average scores for each of the reading variables in grade I.

Table 19 Summary of Average Combined Reading Scores in Grade I for Twelve Schools -- May, 1964

Type of Reading	Average Scores Experimental	 Control	Difference
PWR	42.68	33.01	9.67**
PSR	32.63	27.58	5.05**
PPR	20.98	18.15	2.83**

There is a highly significant difference favouring the experimental schools. The data for each of the reading variables were analyzed using the analysis of variance technique outlined in Tables 20, 21, and 22.

Table 20 Analysis of Variance of Primary Word Recognition (PWR) Scores - Grade I

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	19,424.30	19,424.30	226.42
Within Groups	830	71,212.40	85.79	
Total	831	90,636.70		

F.05 1,830 d.f = 3.85
F.01 1,830 d.f = 6.67

The F-value of 226.42 is greater than the required value of 6.67 for significance at the 1 per cent level and indicates a highly significant difference between the means for primary word recognition (PWR) in grade 1 in 12 Winnipeg schools.

Table 21 Analysis of Variance of Primary Sentence Reading (PSR) Scores - Grade I

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares (Variance)	F-Value
Between Means	1	5280.10	5280.10	55.05
Within Groups	829	79506.50	95.91	
Total	830	84786.60		

F.05 1,829 d.f = 2.84
F.01 1,829 d.f = 6.67

The F-value of 55.05 is greater than the value of 6.67 required for significance at the 1 per cent level and indicates a highly significant difference between the two means for primary sentence reading (PSR) in grade 1 in 12 Winnipeg schools.

Table 22 Analysis of Variance of Primary Paragraph Reading (PPR) Scores - Grade I

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares (Variance)	F-Value
Between Means	1	1660.24	1660.24	63.95
Within Groups	829	21523.26	25.96	
Total	830	23183.50		

F.05 1,829 d.f = 3.85
F.01 1,829 d.f = 6.67

The F- value of 63.95 is greater than the value of 6.67 required for significance at the 1 per cent level and indicates a highly significant difference between the two means for primary paragraph reading in grade 1 in 12 Winnipeg schools.

Two tests, namely advanced word recognition (AWR) and advanced paragraph reading (APR), were given to grade 2 pupils in the experimental group (12 schools) and control group (12 schools) in May, 1964, to determine whether the phonetic method (experimental) proved to be better than the control method (eclectic).

Table 23 is a summary of the average test scores for grade 2 pupils in 12 experimental and 12 control schools.

Table 23 Summary of Average Test Scores for Grade II Pupils in Winnipeg Schools - May, 1964

School	Type of Test	Average Scores		Difference Favouring	
		Experimental (E)	Control (C)	Experimental	Control
EL	AWR	39.95	37.78	2.17	
CD	APR	24.95	18.78	6.17**	
EV	AWR	38.20	34.50	3.70	
CG	APR	19.90	18.66	1.24	
EM	AWR	38.54	38.04	0.50	
CO	APR	20.27	22.85		2.58
EI	AWR	35.91	28.48	7.43**	
CU	APR	20.21	17.29	2.92	
EW	AWR	41.15	33.54	7.61**	
CF	APR	25.38	21.95	3.43*	
EJ	AWR	40.78	36.94	3.84**	
CH	APR	23.53	21.68	1.85	
EK	AWR	40.60	25.45	15.15**	
CQ	APR	26.44	14.09	12.35	
ES	AWR	39.88	37.83	2.05*	
CT	APR	26.73	22.19	4.54*	
EE	AWR	32.40	33.82	1.42	
CN	APR	17.28	19.61		2.33
EX	AWR	39.62	40.03		0.41
CC	APR	24.59	25.19		0.60
EP	AWR	40.06	26.04	14.02**	
CR	APR	24.50	13.27	11.23**	
EA	AWR	38.50	39.04		0.54
CH	APR	24.00	25.04		1.04

The data in Table 23 are not as clearly defined for grade 2 as they are for grade I. In advanced word recognition (AWR) significance of the phonetic method is evident in 6 of the 12 groups, namely, about one half of the cases. For advanced paragraph reading (APR) significance is established for 5 of the 12 groups.

The data for advanced word recognition (AWR) and advanced paragraph reading (APR) have been combined for the 12 experimental and twelve control schools to determine whether a difference between the two methods can be established. Table 24 gives a summary of the average scores for each of the reading variables in grade 2.

Table 24 Summary of Average Combined Reading Scores in Grade II For Twelve Schools

Type of Reading	Average Scores Experimental	Average Scores Control	Difference
AWR	38.88	34.76	4.12**
APR	23.07	20.85	2.22**

There is a highly significant difference favouring the experimental method (phonetic). The data for each of the reading variables were analyzed using the analysis of variance technique outlined in Tables 25 and 26.

Table 25 Analysis of Variance of Advanced Word Recognition (AWR) Scores -- Grade II

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	2363.40	2363.40	45.50
Within Groups	557	28927.98	51.94	
Total	558	31291.38		

F.05 1,557 d.f = 3.86
F.01 1,557 d.f = 6.68

The F-value of 45.50 is greater than the value of 6.68 required for significance at the 1 per cent level and indicates that there is a highly significant difference between the two means for advanced word recognition in grade II.

Table 26 Analysis of Variance for Advanced Paragraph Reading (APR) In Grade II

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	687.89	687.89	18.79
Within Groups	557	20393.41	36.61	
Total	558	21081.30		

F. 05 1,557 d.f = 3.86
F. 01 1,557 d.f = 6.68

The F-value of 18.79 is greater than the value of 6.68 required for significance at the 1 per cent level and indicates that the difference between the two groups is highly significant for advanced paragraph reading in grade 2.

Two tests were given to grade 3 pupils in each of the experimental and control groups to determine whether or not a difference existed between the two groups. Table 27 gives a summary of the average scores for each of the criterion tested, namely, level of comprehension (LC) and reading vocabulary (RV) in grade 3.

Table 27 **Summary of Test Scores for Grade III Pupils**
May, 1964

School	Type of Test	Average Scores		Difference in Favour of	
		Experimental (E)	Control (C)	Experimental	Control
EX	LC	21.88	24.50		2.62
CC	RV	29.80	30.46		0.66
EL	LC	31.18	14.33	16.85	
CD	RV	32.90	19.60	13.30	
EI	LC	20.70	20.03	0.67	
CU	RV	27.25	26.07	1.18	
EA	LC	32.22	29.10	3.12	
CB	RV	38.29	36.23	2.06	
EN	LC	27.86	22.23	5.63	
CO	RV	32.13	28.76	3.37	
EE	LC	21.16	24.73		3.57*
CN	RV	29.46	28.87		0.59
ES	LC	27.04	27.60	0.56	
CT	RV	33.09	33.72		0.63
EV	LC	17.90	19.86		1.96
CG	RV	31.10	27.00		4.10
EK	LC	22.35	20.63	1.72	
CQ	RV	30.38	25.92	4.46	
E J	LC	22.47	14.78	7.69	
CH	RV	29.42	22.47	6.95	
EW	LC	26.04	20.66	5.38	
CF	RV	33.80	25.88	7.92	

The data in Table 27 show no particular trend so far as significance between means is concerned. In some pairs of schools there are wide differences between the two groups (experimental and control means) indicating a possibility that the classes may not be comparable.

The data for all experimental and control schools have been combined. Table 28 gives a summary of the average of the combined scores for experimental and control classes.

Table 28 Summary of Average Combined Reading Scores in Grade III For Twelve Schools -- May, 1964

Type of Reading	Average Scores Experimental	Control	Difference
LC	24.62	22.48	2.14**
RV	31.45	28.55	2.90**

An analysis of variance as outlined in Tables 29 and 30 shows that there is a highly significant difference between the two means for level of comprehension and reading vocabulary in grade 3.

Table 29 Analysis of Variance of Level of Comprehension (LC) Scores Grade III

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares (Variance)	F-Value
Between Means	1	648.69	648.69	10.55
Within Groups	570	35046.63	61.48	
Total	571	35695.32		

F.05 1,570 d.f = 3.86
F.01 1,570 d.f = 6.68

The F-value of 10.55 is greater than the required value of 6.68 for significance at the 1 per cent level and indicates that the difference between the two means is highly significant for level of comprehension in grade 3.

Table 30 Analysis of Variance of Reading Vocabulary (RV) Scores Grade III

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	1205.16	1205.16	21.22
Within Groups	570	32367.74	56.79	
Total	571	33572.90		

F.05 1,570 d.f = 3.86
F.01 1,570 d.f = 6.68

The F-value of 21.22 is greater than the value of 6.68 required of significance at the 1 per cent level and indicates that the difference between the groups is highly significant at the 1 per cent level for reading vocabulary in grade 3.

In 1964, a spelling test was administered to all students in grade 3 and 4 in the experimental and control schools to test the hypothesis that teaching reading by the phonetic method has an influence on spelling skills. Tables 31 and 32 are summaries of the average spelling scores for grade 2 and 3 pupils.

Table 31 Summary of Average Spelling Scores for Grade II Pupils In Winnipeg -- May, 1964

School	Average Scores		Difference in Favour of	
	Experimental (E)	Control (C)	Experimental	Control
EL-CD	28.95	26.07	2.88*	
EV-CG	27.00	27.50		0.50
EM-CO	28.09	27.76	0.33	
EI-CU	26.60	24.03	2.57*	
EW-CF	29.88	26.13	3.75**	
EJ-CH	29.64	25.94	3.70**	
EK-CQ	29.36	20.72	8.64**	
ES-CT	28.30	26.79	1.51*	
EE-CN	25.16	22.41	2.75	
EX-CC	29.06	28.35	0.71	
EP-CR	28.68	22.95	5.73**	
EA-CB	28.00	28.12		0.12

Significance in favour of the experimental schools has been established for 7 of the 12 pairs.

Table 32 Summary of Average Spelling Scores for Grade III Pupils In Winnipeg -- May, 1964

School	Average Scores		Difference in Favour of	
	Experimental(E)	Control (C)	Experimental	Control
EX-CC	35.19	36.64		1.45
EL-CD	36.86	28.33	8.53**	
EI-CU	36.04	34.53	1.51	
EA-CB	38.93	38.36	0.57	
EM-CO	35.56	35.19	0.37	
EE-CN	35.16	33.73	1.43	
ES-CT	35.42	37.42		2.00*
EV-CG	34.50	31.93	2.57	
EK-CQ	36.46	32.26	4.20**	
EJ-CH	36.47	28.73	7.74**	
EW-CF	37.84	33.61	4.23**	

Table 33 gives the average combined spelling scores for grades 2 and 3 in 12 experimental and 12 control schools.

Table 33 Spelling Scores
Grades II and III - May, 1964

Grade	Average Scores		Difference in Favour of	
	Experimental	Control	Experimental	Control
2	28.34	25.74	2.60**	
3	36.27	34.27	2.03**	

The differences in favour of the experimental schools are highly significant as shown by the analysis of variance outlined in Tables 34 and 35.

Table 34 Analysis of Variance of Spelling Scores
Grade II - May, 1964

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	946.38	946.38	64.51
Within Groups	557	8172.72	14.67	
Total	558	9119.10		

F.05 1,557 d.f = 3.86
F.01 1,557 d.f = 6.68

The F-value of 64.51 is greater than the value of 6.68, required for significance at the 1 per cent level and indicates a highly significant difference between the means.

Table 35 Analysis of Variance of Spelling Scores
Grade III - May, 1964

Source of Variation	Degrees of Freedom	Sums of Squares	Mean Square (Variance)	F-Value
Between Means	1	586.68	586.68	20.99
Within Groups	570	16399.62	28.77	
Total	571	16980.30		

F.05 1,570 d.f = 3.86
F.01 1,570 d.f = 6.68

The F-value of 20.99 exceeds the value of 6.68 required for significance at the 1 per cent level, and indicates that there is a highly significant difference between the means.

A comparison of the total reading ability of the experimental (phonetic) and control (eclectic) groups is outlined in Table 36. The total reading ability score for grade I is the sum of scores for primary word recognition (PWR), primary sentence reading (PSR), and primary paragraph reading (PPR), for grade 2, advanced word recognition (AWR) and advanced paragraph reading (APR), and for grade 3 level of comprehension (LC) and reading vocabulary (RV).

Table 36 gives the median and quartile scores for total reading for grades I, 2, and 3.

Table 36

Total Reading Median and Quartile Scores for Grade I, II, and III
May, 1964

	Experimental Group		Control Group
		Grade I	
	N=402		N=428
75 percentile (Q_3)	112.0		98.4
50 percentile (median)	101.0		81.5
25 percentile (Q_1)	84.4		60.9
		Grade II	
	N=274		N=288
75 percentile (Q_3)	69.6		67.0
50 percentile (median)	63.4		59.0
25 percentile (Q_1)	57.0		47.9
		Grade III	
	N=333		N=285
75 percentile (Q_3)	66.7		61.4
50 percentile (median)	55.4		51.0
25 percentile (Q_1)	46.6		39.8

The median and quartile scores for grade I are higher for the experimental group than for the control group with a fairly wide range between the two. In grade 2 the difference between the median and quartile levels favours the experimental group but the difference is in the order of 4.4 points at the median. In grade 3 the median and quartile scores are all higher for the experimental group.

Grade scores have been computed for each of the experimental and control schools and are recorded in Table 37.

Table 37 Average Grade Scores by School, Grade, and Years May, 1964

		Average Grade Scores -- Gates Tests					
		Experimental Group			Control Group		
		Grades			Grades		
School	Years	1	2	3	1	2	3
	1962	3.1			3.9		
EA	1963		5.0			5.1	
CB	1964			6.9			6.3
	1962	2.5			2.4		
EE	1963		3.7			3.4	
CN	1964			5.2			5.6
	1962	2.9			2.6		
EI	1963		4.2			3.8	
CU	1964			5.1			4.9
	1962	3.1			2.7		
EJ	1963		4.0			3.7	
CH	1964			5.4			4.3
	1962	3.3			3.1		
EK	1963		4.3			4.1	
CQ	1964			5.5			5.3
	1962	3.3			2.4		
EL	1963		4.7			3.4	
CD	1964			6.3			4.0
	1962	3.0			3.0		
EM	1963		4.2			4.3	
CO	1964			6.0			5.3
	1962	3.9			3.6		
ES	1963		5.0			5.0	
CT	1964			6.1			6.2
	1962	2.9			2.6		
EV	1963		4.1			3.9	
CG	1964			5.2			5.0
	1962	3.4			3.3		
EW	1963		4.8			4.4	
CF	1964			6.1			4.8
	1962	3.1			3.5		
EX	1963		4.5			4.3	
CC	1964			5.4			5.6
Average		3.1	4.4	5.7	3.0	4.1	5.2
Gain			1.3	1.3		1.1	1.1

The data in Table 37 show the average grade scores at each of the experimental and control schools for grades 1, 2, and 3 for 1962, 1963, and 1964. These data show an almost consistent increase from grade to grade with very little difference in the score between the experimental and control groups.

Conclusions -- Part B

In the supplementary program, where pupils have not been matched within the classes, highly significant differences in favour of the phonetic method of teaching reading have been established for primary word recognition (PWR), primary sentence reading (PSR), and primary paragraph reading (PPR), in grade 1; advanced word recognition (AWR), and advanced paragraph reading (APR) in grade 2; level of comprehension (LC) and reading vocabulary (RV) in grade 3, and for spelling in grades 2 and 3. There appears to be considerable uneven grouping of the schools in this program as is evident by the wide range in differences among the averages for each reading variable. A combination of the factor of uneven grouping of schools plus the differences within classes would tend to produce significant differences where they may not otherwise exist. To overcome this problem, another method of analysis will have to be used where the variability is reduced by some method of weighting each variable to place the data from both experimental and control groups on a more equitable basis.

Research Report 8/65

THE WINNIPEG SCHOOL DIVISION NO. 1
Superintendent's Department

June 18, 1965.

Bureau of Tests and Measurements

A comparison of The Phonetic Keys To Reading (PKR) Program and The Conventional Method of Teaching Reading in Winnipeg 1962-1965.

Introduction

PART A

Over the years there has been a great deal of controversy in regard to the preferred method of teaching children to read. In the most common method of teaching reading, initially sight words are taught first to be followed by analysis of words by phonics, structure, general configuration, and context clues. The alternative to this method is to begin with phonetic analysis and the sounding of letters from which words are built. In the common approach, learning is from the whole to the part, whereas in the phonetic approach it is from the part to the whole.

The Winnipeg School Division No. 1 authorized an experiment in 1962, which has become known as the Phonetic Keys to Reading Experiment, to compare the results of teaching reading by the phonetic and the conventional methods in three Winnipeg schools. These schools, designated as School 1, 2 and 3, are located in the northern, central, and southern sections of the city.

Great care was taken in the initial stages of this experiment to reduce pupil variability as much as possible. This was done by setting up matched pairs of pupils for the experimental and control classes. In the initial testing in June 1962, all kindergarten and grade I pupils who were proceeding to grade I and II respectively in September were tested for ability by the Pintner-Cunningham Primary Ability Test, and for reading readiness by the Harrison-Stroud Reading Readiness Test for grade I, and by the Gates Primary Sentence Reading (PSR) and the Primary Paragraph Reading (PPR) Tests for grade I. The data from these tests were combined for each pupil in each grade for the purpose of making up the matched pairs for the experimental and control classes.

In order to maintain control of pupil-variability as much as possible throughout the three year period (1962-1965) of the experiment, both students in a pair were dropped if one dropped out. Although a certain degree of accuracy was gained by keeping the pairs intact, it soon became evident that the number of pairs would be greatly reduced by the end of the experiment. Table I shows the number of matched pairs at the beginning of the experiment in 1962, and the remaining pairs at the end of May 1965.

Table 1

MATCHED PAIRS CONTROLLED EXPERIMENT - PHONETIC KEYS TO READING 1962-1965

Stream I Pupils who began the Phonetic Keys To Reading Program in grade II.

	Number starting experiment in Fall 1962 - Gr. II Pairs	First Testing Spring 1963 Gr. II (1 Yr.) Pairs	Second Testing Spring 1964 Gr. III (2 Yrs.) Pairs	Third Testing Spring 1965 Gr. IV (3 Yrs.) Pairs
School No. 1				
Boys	14	9	4	2
Girls	18	14	12	8
Total	32	23	16	10
School No. 2				
Boys	18	13	13	5
Girls	18	10	10	7
Total	36	23	23	12
School No. 3				
Boys	14	11	9	5
Girls	18	16	13	9
Total	32	27	22	14

Stream 2. Pupils who began the Phonetic Keys To Reading Program in grade I.

	Number starting experiment in Fall 1962 - Gr. I Pairs	First Testing Spring 1963 Gr. I (1 Yr.) Pairs	Second Testing Spring 1964 Gr. II (2 Yrs.) Pairs	Third Testing Spring 1965 Gr. III (3 Yrs.) Pairs
School No. 1				
Boys	18	13	7	6
Girls	18	12	7	5
Total	36	25	14	11
School No. 2				
Boys	17	14	9	9
Girls	17	14	10	9
Total	34	28	19	18
School No. 3				
Boys	18	18	13	7
Girls	18	13	9	8
Total	36	31	22	15

Methods and Materials

During the three year period (1962-1965) testing was administered to grade I, II, III, and IV pupils in the experimental and control classes between the end of April and the end of May. In grade I, three Gates tests were used, namely, Primary Word Recognition (PWR), Primary Sentence Reading (PSR), and Primary Paragraph Reading (PPR); in grade II, Gates Advanced Word Recognition (AWR) and Advanced Paragraph Reading (APR); in grade III, Gates basic reading tests -- Level of Comprehension (LC) and Reading Vocabulary (RV).

In this experiment, the results of testing at the end of grade III can be considered as the end products of teaching by the Phonetic Keys to Reading and conventional methods. The Level of Comprehension (LC) test given in grade III contains 26 passages arranged in order of difficulty and is designed to measure complexity and difficulty of the material pupils can read. The Reading Vocabulary (RV) test contains 65 items arranged in order of difficulty, and measures the range of the pupils' effective reading vocabulary.

In 1964, the experiment was broadened in scope to test the effect of teaching by the two methods on spelling skills as measured by the Metropolitan spelling test for grade III. In 1965, the Schonell Spelling test was administered to grade II and III pupils who are currently in the experimental program, and to grade IV pupils who were in the experiment in 1964.

In 1965, the Gates Reading Survey test was given to grade IV pupils who completed the Phonetic Keys to Reading program in 1964. The survey test is a diagnostic test designed to reveal specific strengths and weaknesses in reading abilities.

Experimental and control classes have been arranged in streams 1 and 2 depending upon the year and grade level when they started. For example, stream 1 contains pupils who did not take the Phonetic Keys To Reading program in grade 1, but started this program in grade II in September 1962, and were tested for the first time in June 1963. Stream 2 contains those pupils who started The-Phonetic Keys To Reading program in grade 1 in September 1962 and were tested at the end of grade 1 in June 1963, and in 1964 and 1965 in grades II and III, respectively.

The data from all the tests for the matched pairs have been analyzed by the analysis of variance method to determine if statiscally significant differences exist between the experimental (PKR) program and the control (conventional) methods. The 5 per cent level of significance (F-values) has been chosen to determine if a real difference exists between the experimental and control groups.

Results and Discussion

The results of the Phonetic Keys to Reading program versus the conventional method of teaching reading for "matched pairs" of students are outlined in Table 2 for three Winnipeg schools. After the pairs of students were established in 1962, an analysis of the initial testing for Primary Sentence Reading (PSR) and Primary Paragraph Reading (PPR) in grade I was conducted to determine whether the matching was uniform at the three schools. The results of the 1962 analysis for PSR and PPR at each of the three schools revealed no statistically significant difference between the experimental and control groups, and on this basis it is reasonable to assume that any differences in subsequent years could be attributed to differences between the two methods, provided all other factors are equal and constant.

Table 3 is a statistical summary of the results of the Phonetic Keys To Reading Experiment for each of the tests given in grades I, II, III, and IV.

Table 4 contains the grade scores for experimental and control pupils who have been in the experiment since the beginning and who have had a complete set of tests up until the end of grade IV.

Table 2 — Results of The Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Three Winnipeg Winnipeg Schools. 1962 - 1965.

School No. 1

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II.

Grade	Year	Type of Test	Average Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1962	PSR	25.33	25.23	0.10	- -
		PPR	16.82	16.43	0.39	- -
II	1963	AWR	29.39	31.52	- -	2.13
		APR	20.52	20.82	- -	0.30
III	1964	LC	20.56	21.69	- -	1.13
		RV	25.25	26.25	- -	1.00
		Spelling	31.75	33.38	- -	1.63
IV	1965	Speed	19.10	20.70	- -	1.60
		Vocabulary	25.90	26.50	- -	0.60
		Comprehension	18.40	24.60	- -	6.20**
		Spelling	51.60	56.50	- -	4.90

Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I.

I	1963	PSR	30.16	27.44	2.72	- -
		PPR	21.24	19.20	2.04	- -
II	1964	AWR	39.50	36.57	2.93	- -
		APR	20.50	22.85	- -	2.35
III	1965	LC	23.08	21.50	1.58	- -
		RV	29.27	27.09	2.18	- -
		Spelling	49.83	45.58	4.25	- -

School No. 2

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II

Grade	Year	Type of Test	Average Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1962	PSR	24.78	25.34	- -	0.56
		PPR	17.47	17.17	0.30	- -
II	1963	AWR	32.61	31.00	1.61	- -
		APR	20.52	20.48	0.04	- -
III	1964	LC	20.04	21.73	- -	1.69
		RV	28.60	27.73	0.87	- -
		Spelling	36.52	36.86	- -	0.34
IV	1965	Speed	15.27	14.45	0.82	- -
		Vocabulary	21.75	24.00	- -	2.25
		Comprehension	21.75	23.83	- -	2.08
		Spelling	59.25	60.41	- -	1.16

Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I.

Grade	Year	Type of	Average Scores		Difference in favour of:-	
		Test	Exp.	Cont.	Exp.	Cont.
I	1963	PSR	33.64	26.67	6.97*	- -
		PPR	21.14	16.92	4.22*	- -
II	1964	AWR	37.63	36.10	1.53	- -
		APR	21.16	20.79	0.37	- -
III	1965	LC	25.27	20.50	4.77**	- -
		RV	30.22	28.61	1.61	- -
		Spelling	55.83	52.05	3.78	- -

School No. 3

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II.

Grade	Year	Type of	Average Scores		Difference in favour of:-	
		Test	Exp.	Cont.	Exp.	Cont.
I	1962	PSR	29.84	29.30	0.54	- -
		PPR	19.15	19.48	- -	0.33
II	1963	AWR	36.96	37.66	- -	0.70
		APR	22.85	25.14	- -	2.29
III	1964	LC	23.04	23.86	- -	0.82
		RV	32.27	30.04	2.23	- -
		Spelling	37.22	36.31	0.91	- -
IV	1965	Speed	23.28	22.78	0.50	- -
		Vocabulary	29.35	29.28	0.07	- -
		Comprehension	24.21	25.07	- -	0.86
		Spelling	60.43	59.00	1.43	- -

Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I.

I	1963	PSR	32.94	24.06	8.88**	- -
		PPR	22.61	18.48	4.13**	- -
II	1964	AWR	39.73	34.23	5.50**	- -
		APR	23.40	20.27	3.13	- -
III	1965	LC	28.00	19.27	8.73*	- -
		RV	33.53	24.20	9.33*	- -
		Spelling	55.87	46.00	9.87*	- -

PSR = Primary Sentence Reading
PPR = Primary Paragraph Reading
AWR = Advanced Word Recognition
APR = Advanced Paragraph Reading

LC = Level of Comprehension
RV = Reading Vocabulary
* = Difference significant at 5 per cent level.
** = Difference significant at 1 per cent level.

The results outlined in table 2 show that for stream 1 (pupils who began the Phonetic Keys To Reading program in grade II), there is no statistically significant difference between the two methods at the end of grade III at any of the three schools. For stream 2, (pupils who were taught the Phonetic Keys To Reading program in grade I), the results show that there is a statistically significant difference favouring the experimental (PKR) group for Primary Sentence Reading (PSR) and Primary Paragraph Reading (PPR) at School No. 2 and School No. 3, but not at School No. 1. Grade II pupils in stream 2 scored significantly higher in the experimental (PKR) group than those in the control (conventional) group for Advanced Word Recognition (AWR) at School No.3, but not at School No. 1 and No. 2. There was no significant difference between the two methods for Advanced Paragraph Reading (APR) at any of the three schools. The data show that there are statistically significant differences favouring the Phonetic Keys To Reading program for pupils in stream 2 for Level of Comprehension (LC) at School No. 2 and No.3; for Reading Vocabulary (RV) at School No. 3, and for spelling at School No.3. At the end of grade IV, when pupils were one year removed from the experimental program, no statistically significant differences were found between the two methods for speed and accuracy, and reading vocabulary as measured by the Gates Survey tests. In one case, School No. 1, there was highly significant difference favouring the control (conventional) method for reading comprehension in grade IV, but this was not evident at School No. 2 and No. 3 and no trend can be established.

Table 3 Summary of Statistical Results
Phonetic Keys to Reading Experiment 1962 - 1965

School	Stream	Grade I		Grade II		Grade III			Grade IV			
		PSR	PPR	AWR	APR	LC	RV	Spell.	Speed and Acc.	Reading Vocab.	Comp.	Spell.
No. 1	1	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	**(C)	N.S.
	2	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	- -	- -	- -	- -
No. 2	1	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	2	*(E)	*(E)	N.S.	N.S.	**(E)	N.S.	N.S.	- -	- -	- -	- -
No. 3	1	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	2	**(E)	**(E)	**(E)	N.S.	* (E)	* (E)	* (E)	- -	- -	- -	- -

*= Differences significant at 5 per cent level
**= Differences significant at 1 per cent level
N.S. = Differences not significant
(E) = Differences in favour of experimental classes
(C) = Differences in favour of control classes

Table 4 shows the average grade scores for each of the reading tests administered to grade I, II, III, and IV pupils from 1962 to 1965. These data have not been subjected to a statistical analysis as the grade score is derived from the same raw score data for which statistical analysis is given in tables 2 and 3. Since the grade scores are derivatives of the raw score, it is reasonable to conclude that any differences between the two methods as they apply to the grade scores will be the same.

Table 4

Average Grade Scores -- Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Three Winnipeg Schools 1962 - 1965.

School No. 1

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II.

Grade	Year	Type of Test	Average Grade Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1962	PSR	2.6	2.6	- -	- -
		PPR	2.5	2.5	- -	- -
II	1963	AWR	3.6	3.9	- -	0.3
		APR	4.0	4.3	- -	0.3
III	1964	LC	4.2	4.8	- -	0.6
		RV	5.0	5.4	- -	0.4
IV	1965	Speed	5.8	6.2	- -	0.4
		Vocabulary	5.4	5.6	- -	0.2
		Comprehension	4.7	6.2	- -	1.5
Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I.						
I	1963	PSR	2.8	2.8	- -	- -
		PPR	3.0	3.0	- -	- -
II	1964	AWR	4.3	4.2	0.1	- -
		APR	3.9	4.2	- -	0.3
III	1965	LC	4.9	4.4	0.5	- -
		RV	6.0	5.3	0.7	- -

School No. 2

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II.

Grade	Year	Type of Test	Average Grade Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1962	PSR	2.5	2.6	- -	0.1
		PPR	2.4	2.5	- -	0.1
II	1963	AWR	3.7	3.7	- -	- -
		APR	3.8	4.0	- -	0.2
III	1964	LC	4.3	4.6	- -	0.3
		RV	5.4	5.6	- -	0.2
IV	1965	Speed	5.2	5.2	- -	- -
		Vocabulary	5.8	5.3	0.5	- -
		Comprehension	5.7	6.1	- -	0.4

School No. 2 (Continued)

Stream 2 . Pupils who began the Phonetic Keys To Reading program in grade I.

Grade	Year	Type of Test	Average Grade Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1963	PSR	3.0	2.7	0.3	- -
		PPR	3.2	2.6	0.6	- -
II	1964	AWR	4.4	4.2	0.2	- -
		APR	4.1	3.9	0.2	- -
III	1965	LC	5.3	4.4	0.9	- -
		RV	6.1	5.6	0.5	- -

School No. 3

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II.

Grade	Year	Type of Test	Average Grade Scores		Difference in favour of:-	
			Exp.	Cont.	Exp.	Cont.
I	1962	PSR	2.9	2.9	- -	- -
		PPR	2.9	2.9	- -	- -
II	1963	AWR	4.3	4.4	- -	0.1
		APR	4.4	4.6	- -	0.2
III	1964	LC	4.8	5.0	- -	0.2
		RV	6.3	6.2	0.1	- -
IV	1965	Speed	6.6	6.5	0.1	- -
		Vocabulary	6.0	5.9	0.1	- -
		Comprehension	6.2	6.6	- -	0.4

Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I.

I	1963	PSR	3.1	2.6	0.5	- -
		PPR	3.7	2.8	0.9	- -
II	1964	AWR	4.6	4.2	0.4	- -
		APR	4.5	4.2	0.3	- -
III	1965	LC	5.7	4.4	1.3	- -
		RV	6.1	5.0	1.1	- -

In the beginning of the fall term each year, the Otis Mental Test (Alpha Short Form) is given to all Winnipeg grade III pupils to obtain a mental maturity rating on each. In the following May, the Stanford Elementary Reading Test Form J is given to all grade III pupils to determine the level of reading skills. To provide a second check on the results outlined in tables 2 and 3, additional research has been conducted to determine whether the significant differences that exist in stream 2 (pupils who were taught the Phonetic Keys to Reading program in grade I) can be attributed to differences in mental ability of the two groups, or to some other variable.

The results of the Otis Mental Ability Test and the Stanford Elementary Reading Test have been analyzed for the matched pairs to determine whether there are any significant differences between the mental ability and reading skills of the two groups.

Table 5 contains data for the Otis Mental Ability Test (Alpha Short Form), and the Stanford Elementary Reading Test Form J for pupils in the matched pairs at each of the three experimental schools for stream 2.

Table 5 Results of the Otis Mental Ability Test and Stanford Elementary Test, Form J, for Grade III pupils who were taught the Phonetic Keys to Reading Program in Grade I (Stream 2)

School	Otis Mental Ability Test Score (1		Stanford Elementary Reading Test Grade Score (2					
			Word Reading		Paragraph Reading		Average Reading	
	Exp.	Control	Exp.	Control	Exp.	Control	Exp.	Control
No. 1	100.8	103.4	4.8	4.9	4.8	4.9	4.7	4.9
No. 2	99.9	100.6	5.3*	4.8	5.1	5.0	5.2	4.8
No. 3	106.9	107.3	5.3	5.2	6.6*	5.4	5.8	5.3

* Significantly higher than control at 5 per cent level.
(1 Fall term 1964.
(2 May 1965)

The results in table 5 show that there is no statistically significant difference between the experimental and control group as measured by the Otis Test of Mental Ability (Alpha Short Form) given at the beginning of grade III at any of the three schools. This means that on the basis of the Otis Mental Ability Test the variability due to differences in ability between the two groups can be eliminated.

The results of the Stanford Elementary Reading Test Form J given in May 1965, show a significant difference favouring the Phonetic Keys to Reading group for Word Meaning at School No. 2 but not a School No. 1 and No. 3, and for Paragraph Meaning at School No. 3, but not at School No. 1 and No. 2. There is no statistically significant difference between the Phonetic Keys To Reading program and the conventional method of teaching reading at the end of grade III for average reading grade scores as measured by the Stanford Elementary Reading Test Form J.

Since differences in the mental ability scores, and the average reading scores are not significantly different, and since the difference that does appear, is found in one of the three schools for Word Meaning and another for Paragraph Meaning, it can be assumed that the significant difference found at School No. 2 for Word Meaning and at School No. 3 for Paragraph Meaning might be attributed to local factors common to the individual school.

Conclusions

1. The results of this experiment show that there are no statistically significant differences between The Phonetic Keys To Reading program and the conventional method of teaching reading to pupils who began the Phonetic Keys to Reading program in grade II. This may be interpreted as meaning that by the end of grade II, the puils have acquired sufficient reading skills to render any differences due to method of minimum importance.

2. Under conditions of this experiment there is a trend which shows that pupils taught The Phonetic Keys To Reading program beginning in grade I, score significantly higher on the Gates Primary Sentence (PSR), and Primary Paragraph (PPR) tests than do those taught by the conventional method at 2 of the 3 schools.

3. The initial trend favouring the Phonetic Keys To Reading program in grade I over the conventional program diminished in grade II. Similar results were obtained for grade II in 1964.

4. The trend that is established in grade I in favour of the Phonetic Keys To Reading program "faded out" in grade II and reappeared in grade III at 2 of the 3 schools. Because the trend fluctuates and is inconsistent this might suggest that other variables are exercising an influence upon the results. Under these circumstances it seems reasonable to assume that no firm basis has been established which would confirm that one of these two methods of teaching reading is superior to the other.

5. At the end of grade IV there are no statistically significant differences between the two methods of teaching reading. A projection of this point suggests that, due to known differences that exist in the way in which pupils learn, the teaching of reading should be modified to suit each child's individual needs.

6. On the basis of this experiment, there is no conclusive evidence to indicate that the Phonetic Keys to Reading program is superior to the conventional method in teaching spelling skills.

The results of this experiment indicate that in grade I there is a trend that appears to favour the Phonetic Keys to Reading program over the conventional method of teaching reading, but in grade II this trend is less clearly defined, and by the end of grade III and IV there is no significant difference between the two methods. This suggests that in the end the two methods of teaching reading will produce approximately the same results when measured within the limits of the testing devices used in this study.

Since, in the primary grades, "word attack" skills form a major part of the reading program, and since phonics is common to both the Phonetic Keys To Reading and the conventional program, although taught differently and at different times, it seems reasonable to expect that the results would show little variation as Phonetic Keys To Reading is a part of the conventional program.

PART B

Part B contains a comparison of the Phonetic Keys To Reading Program and the conventional method of teaching reading in 24 schools. The 12 schools, designated as "experimental", were selected by a committee of the Board of Trustees to assess the effect of the two methods of teaching reading in parallel with the experiment conducted in the three schools. Twelve other schools were selected and designated as "control". No attempt was made in these schools to minimize pupil variability by pairing, or by equating teachers to minimize teacher difference. In addition, data are included for some pupils in grade 1 in Schools No. 1, No. 2, and No. 3 who were not equated, nor were the teachers selected. It is difficult to evaluate how much the results in these classes have been affected by pupil and teacher variability.

The data have been arranged in streams 1, 2, 3, and 4, depending upon the time when the pupils began in grade 1, and have been analyzed by the analysis of variance method using a 1620 computer. Only those pupils who have taken all the tests have been included in these analyses. The 5 per cent level of significance (F-values) has been chosen to determine if a real difference exists between the experimental and control schools.

Results and Discussion

Table 1 contains data for the experimental and control schools for stream 1. Pupils in stream 1 began using PKR in grade II in September 1962, and were tested for the first time in June 1963.

Table 2 gives results for stream 2 pupils who began using PKR in grade 1, in September 1962, and were tested for the first time in May 1963.

Table 3 gives results for stream 3 pupils who began using PKR in grade 1, in September 1963, and were tested for the first time in May 1964. This table also contains the results for those pupils who were not paired in Schools No. 1, No. 2 and No. 3.

Table 4 gives the results for stream 4 pupils who began using PKR in grade 1 in September 1964 and were tested for the first time in May 1965. It also contains the results for those pupils who were not paired in Schools No. 1, No. 2 and No. 3.

Table 5 is a summary of the statistical results for all the schools that have participated in this program since the beginning, in 1962.

Table 6 gives the grade scores for stream 1 pupils who began the Phonetic Keys To Reading program in grade II in September 1962.

Table 7 gives the grade scores for stream 2 pupils who began the Phonetic Keys To Reading program in grade 1 in September 1962.

Table 8 gives the grade scores for stream 3 pupils who began the Phonetic Keys To Reading program in grade 1 in September 1963.

Table 9 gives the grade scores for stream 4 pupils who began the Phonetic Keys To Reading program in grade 1 in September 1964.

Table 1 Results of The Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg Schools. 1963 - 1965.

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II in September 1962.

School	Grade	Year	Type of Test	Average Grade Scores		Difference in favour of	
				Experimental (E)	Control (C)	Experimental	Control
EE-CN	II	1963	AWR	33.79	35.50	- -	1.71
			APR	21.38	26.75	- -	5.37**
	III	1964	LC	21.96	23.56	- -	1.60
			RV	29.29	28.25	1.04	- -
			Spell.	36.04	32.94	3.10*	- -
	IV	1965	Speed	19.71	21.75	- -	2.04
			Vocab.	26.79	28.56	- -	1.77
			Comp.	21.95	25.12	- -	3.17*
			Spell.	58.38	58.50	- -	0.12
EI-CU	II	1963	AWR	35.57	31.68	3.89*	- -
			APR	21.71	19.41	2.30*	- -
	III	1964	LC	20.62	19.41	1.21	- -
			RV	26.90	25.54	1.36	- -
			Spell.	35.71	34.36	1.35	- -
	IV	1965	Speed	22.28	22.91	- -	0.63
			Vocab.	25.33	28.14	- -	2.81
			Comp.	23.90	21.54	2.36	- -
			Spell.	54.57	52.68	1.89	- -
EK-CQ	II	1963	AWR	37.54	32.18	5.36*	- -
			APR	22.25	21.07	1.18	- -
	III	1964	LC	27.50	20.86	6.64**	- -
			RV	27.07	25.43	1.64	- -
			Spell.	37.71	31.96	5.75**	- -
	IV	1965	Speed	20.00	22.07	- -	2.07
			Vocab.	25.82	29.21	- -	3.39
			Comp.	25.39	22.36	3.03	- -
			Spell.	61.11	55.25	5.86	- -
EL-CD	II	1963	AWR	35.22	26.50	8.72**	- -
			APR	24.33	18.67	5.66**	- -
	III	1964	LC	30.11	13.75	16.36**	- -
			RV	31.78	19.75	12.03**	- -
			Spell.	36.61	28.00	8.61**	- -
	IV	1965	Speed	23.56	20.75	2.81	- -
			Vocab.	28.78	21.75	7.03**	- -
			Comp.	24.44	19.58	4.86*	- -
			Spell.	58.11	47.17	10.94**	- -
EM-CO	II	1963	AWR	37.44	33.83	3.61	- -
			APR	21.78	20.83	0.95	- -
	III	1964	LC	28.33	20.94	7.39**	- -
			RV	31.78	28.17	3.61	- -
			Spell.	35.83	35.22	0.61	- -
	IV	1965	Speed	19.22	17.78	1.44	- -
			Vocab.	28.22	26.44	1.78	- -
			Comp.	23.88	22.39	1.49	- -
			Spell.	56.33	57.50	- -	1.17

Table 1 Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
ES-CT	II	1963	AWR	38.08	41.00	- -	2.92
			APR	24.08	26.71	- -	2.63**
	III	1964	LC	23.00	27.50	- -	4.50*
			RV	30.33	33.78	- -	3.45
			Spell.	34.08	37.68	- -	3.60**
	IV	1965	Speed	23.42	22.78	0.64	- -
			Vocab.	28.92	31.68	- -	2.76
			Comp.	25.83	27.14	- -	1.31
			Spell.	57.58	62.39	- -	4.81
EW-CF	II	1963	AWR	40.26	34.53	5.73*	- -
			APR	26.32	22.65	3.67*	- -
	III	1964	LC	27.84	20.94	6.90*	- -
			RV	34.89	25.65	9.24**	- -
			Spell.	37.84	33.82	4.02*	- -
	IV	1965	Speed	25.00	18.00	7.00**	- -
			Vocab.	27.79	22.29	5.50**	- -
			Comp.	26.68	25.65	1.03	- -
			Spell.	64.58	60.59	3.99	- -
EX-CC	II	1963	AWR	37.49	35.72	1.77	- -
			APR	23.74	21.60	2.14*	- -
	III	1964	LC	21.98	23.48	- -	1.50
			RV	30.26	29.92	0.34	- -
			Spell.	36.00	36.36	- -	0.36
	IV	1965	Speed	17.09	20.32	- -	3.23*
			Vocab.	28.72	29.68	- -	0.96
			Comp.	21.88	24.08	- -	2.20
			Spell.	60.44	57.28	3.16	- -
EV-CG	II	1963	AWR	36.10	31.00	5.10	- -
			APR	20.90	19.75	1.15	- -
	III	1964	LC	17.90	20.92	- -	3.02
			RV	31.10	27.17	3.93	- -
			Spell.	34.50	31.58	2.92	- -
	IV	1965	Speed	22.80	22.83	- -	0.03
			Vocab.	28.70	27.92	0.78	- -
			Comp.	24.30	25.17	- -	0.87
			Spell.	57.30	53.75	3.55	- -
EA-CB	II	1963	AWR	40.22	41.56	- -	1.34
			APR	26.09	27.44	- -	1.35
	III	1964	LC	30.78	30.04	0.74	- -
			RV	37.43	37.04	0.39	- -
			Spell.	38.82	38.30	0.52	- -
	IV	1965	Speed	26.35	31.81	- -	5.46**
			Vocab.	33.65	34.81	- -	1.16
			Comp.	28.26	28.44	- -	0.18
			Spell.	69.61	67.18	2.43	- -
EJ-CH	II	1963	AWR	32.32	26.00	6.32*	- -
			APR	19.89	18.07	1.82	- -
	III	1964	LC	21.42	15.86	5.56**	- -
			RV	29.00	22.00	7.00**	- -
			Spell.	36.10	28.50	7.60**	- -
	IV	1965	Speed	18.37	19.43	- -	1.06
			Vocab.	25.74	21.28	4.46*	- -
			Comp.	22.26	18.71	3.55	- -
			Spell.	55.53	47.43	8.10*	- -

Table 2. Results of the Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg Schools. 1963 - 1965.

Stream 2. Pupils who began the Phonetic Keys To Reading Program in grade I in September 1962.

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
EE-CN	I	1963	PSR	36.69	28.77	7.92*	- -
			PPR	23.12	17.86	5.26*	- -
	II	1964	AWR	31.38	37.54	- -	6.16**
			APR	16.06	23.14	- -	7.08**
	III	1965	LC	17.74	19.09	- -	1.35
			RV	22.81	24.77	- -	1.96
			Spell.	43.50	43.41	- -	0.09
EI-CU	I	1963	PSR	34.81	24.58	10.23**	- -
			PPR	21.00	15.96	5.04**	- -
	II	1964	AWR	36.05	29.17	6.88**	- -
			APR	20.19	17.96	2.23	- -
	III	1965	LC	20.00	17.00	3.00	- -
			RV	25.10	26.38	- -	0.28
			Spell.	49.43	44.25	5.18*	- -
EK-CQ	I	1963	PSR	34.22	21.50	12.72**	- -
			PPR	21.22	17.62	3.60*	- -
	II	1964	AWR	40.94	29.12	11.82**	- -
			APR	27.28	15.75	11.53**	- -
	III	1965	LC	22.67	16.38	6.29*	- -
			RV	30.00	22.50	7.50*	- -
			Spell.	54.78	38.37	16.41**	- -
EL-CD	I	1963	PSR	39.38	29.82	9.56**	- -
			PPR	23.28	19.09	4.19**	- -
	II	1964	AWR	41.19	38.45	2.74	- -
			APR	25.38	20.00	5.38*	- -
	III	1965	LC	23.00	21.45	1.55	- -
			RV	30.67	27.73	2.94	- -
			Spell.	47.67	52.82	- -	5.15
EM-CO	I	1963	PSR	35.38	24.74	10.64*	- -
			PPR	22.75	17.26	5.49**	- -
	II	1964	AWR	39.50	37.79	1.71	- -
			APR	20.38	23.00	- -	2.62
	III	1965	LC	23.88	23.95	- -	.07
			RV	33.88	29.79	4.09	- -
			Spell.	47.88	49.47	- -	1.59
EP-CR	I	1963	PSR	37.19	22.94	14.25**	- -
			PPR	22.75	16.24	6.51**	- -
	II	1964	AWR	40.06	27.88	12.18**	- -
			APR	24.44	14.35	10.09**	- -
	III	1965	LC	24.50	14.47	10.03**	- -
			RV	30.50	22.24	8.26**	- -
			Spell.	48.81	38.24	10.57**	- -

Table 2. Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of:-	
				Experimental (E)	Control(C)	Experimental	Control
ES-CT	I	1963	PSR	37.87	37.21	.66	- -
			PPR	22.00	23.03	- -	1.03
	II	1964	AWR	39.61	39.15	.46	- -
			APR	21.96	24.96	- -	3.00*
	III	1965	LC	21.83	25.64	- -	3.81
			RV	30.26	32.36	- -	2.10
			Spell.	49.09	54.09	- -	5.00
EW-CF	I	1963	PSR	37.58	22.93	14.65**	- -
			PPR	22.67	16.87	5.80**	- -
	II	1964	AWR	41.12	34.80	6.32**	- -
			APR	25.29	23.13	2.16	- -
	III	1965	LC	26.88	19.06	7.82**	- -
			RV	34.25	26.60	7.65**	- -
			Spell.	59.58	46.40	13.18**	- -
EX-CC	I	1963	PSR	36.85	36.92	.07	- -
			PPR	22.62	24.52	- -	1.90*
	II	1964	AWR	40.23	40.00	.23	- -
			APR	25.77	25.08	.69	- -
	III	1965	LC	23.00	26.84	- -	3.84
			RV	30.92	33.16	- -	2.24
			Spell.	52.69	54.92	- -	2.23
EV-CG	I	1963	PSR	37.00	28.21	8.79*	- -
			PPR	21.50	19.94	1.56	- -
	II	1964	AWR	38.50	36.88	1.62	- -
			APR	20.00	18.76	1.24	- -
	III	1965	LC	21.25	20.00	1.25	- -
			RV	28.75	27.59	1.16	- -
			Spell.	44.12	49.70	- -	5.58
EA-CB	I	1963	PSR	36.95	34.91	2.04	- -
			PPR	20.57	20.96	- -	.39
	II	1964	AWR	38.81	38.70	.11	- -
			APR	23.86	24.87	- -	1.01
	III	1965	LC	24.48	29.17	- -	4.69
			RV	30.33	34.83	- -	4.50
			Spell.	50.95	55.07	- -	4.12
EJ-CH	I	1963	PSR	37.96	31.80	6.16*	- -
			PPR	23.42	20.67	2.75*	- -
	II	1964	AWR	41.21	36.53	4.68**	- -
			APR	24.33	20.80	3.53*	- -
	III	1965	LC	30.25	22.13	8.12**	- -
			RV	33.33	27.80	5.53*	- -
			Spell.	58.12	45.80	12.32**	

Table 3. Results of the Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg Schools. 1964 - 1965.

Stream 3. Pupils who began the Phonetic Keys To Reading program in grade I in September 1963.

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
School No. 1	I	1964	PWR	45.25	39.08	5.17**	- -
			PSR	37.54	35.17	2.37	- -
			PPR	22.54	20.67	1.87*	- -
	II	1965	AWR	36.33	35.12	1.21	- -
			APR	23.58	21.00	2.58*	- -
			Spell.	40.67	36.29	4.38	- -
School No. 2	I	1964	PWR	40.70	36.09	4.61*	- -
			PSR	30.50	29.54	.96	- -
			PPR	20.30	17.68	2.62	- -
	II	1965	AWR	33.50	36.59	- -	3.09
			APR	21.05	22.18	- -	1.13
			Spell.	40.20	41.36	- -	1.16
School No. 3	I	1964	PWR	43.28	38.31	4.97	- -
			PSR	36.00	32.85	3.15	- -
			PPR	21.52	20.23	1.29	- -
	II	1965	AWR	38.12	38.15	- -	.03
			APR	22.84	22.69	.15	- -
			Spell.	41.16	40.08	1.08	- -
EE-CN	I	1964	PWR	45.37	31.95	13.42**	- -
			PSR	37.83	26.45	11.38**	- -
			PPR	22.66	17.24	5.42**	- -
	II	1965	AWR	38.51	32.81	5.70**	- -
			APR	26.54	21.33	5.21**	- -
			Spell.	42.97	30.36	12.61**	- -
EI-CU	I	1964	PWR	44.19	35.57	8.62**	- -
			PSR	30.69	33.81	- -	3.12
			PPR	21.12	20.76	.36	- -
	II	1965	AWR	36.44	38.19	- -	1.75
			APR	22.12	16.57	5.55**	- -
			Spell.	36.38	40.05	- -	3.67
EK-CQ	I	1964	PWR	46.40	40.39	6.01**	- -
			PSR	41.60	33.22	8.38**	- -
			PPR	24.40	21.30	3.10**	- -
	II	1965	AWR	40.13	36.00	4.13*	- -
			APR	26.07	23.17	2.90*	- -
			Spell.	47.27	35.17	12.10**	- -
EL-CD	I	1964	PWR	44.96	29.48	15.48**	- -
			PSR	37.22	23.24	13.98**	- -
			PPR	23.43	13.20	10.23**	- -
	II	1965	AWR	38.26	31.12	7.14**	- -
			APR	22.09	18.60	3.49*	- -
			Spell.	40.22	30.40	9.82**	- -

Table 3 **Continued**

School	Grade	Year	Type of	Average Grade Scores		Difference in Favour of	
			Test	Experimental (E)	Control (C)	Experimental	Control
EM-CO	I	1964	PWR	42.83	34.07	8.76**	- -
			PSR	36.08	27.96	8.12**	- -
			PPR	21.17	17.67	3.50	- -
	II	1965	AWR	37.00	32.41	4.59	- -
			APR	23.17	21.70	1.47	- -
			Spell.	36.92	33.04	3.88	- -
EP-CR	I	1964	PWR	44.83	18.90	25.93**	- -
			PSR	31.91	15.71	16.20**	- -
			PPR	21.39	14.33	7.06**	- -
	II	1965	AWR	38.39	18.81	19.58**	- -
			APR	23.52	14.71	8.81**	- -
			Spell.	40.48	20.33	20.15**	- -
ES-CT	I	1964	PWR	44.20	35.74	8.46**	- -
			PSR	30.46	29.26	1.20	- -
			PPR	20.69	20.66	.03	- -
	II	1965	AWR	37.90	33.66	4.24*	- -
			APR	21.74	19.08	2.66*	- -
			Spell.	38.92	35.71	3.21	- -
EW-CF	I	1964	PWR	42.42	30.67	11.75**	- -
			PSR	32.92	25.60	7.32*	- -
			PWR	19.92	17.73	2.19	- -
	II	1965	AWR	39.19	29.33	9.86**	- -
			APR	22.88	19.60	3.28**	- -
			Spell.	46.19	26.93	19.26**	- -
EX-CC	I	1964	PWR	42.40	34.36	8.04**	- -
			PSR	30.21	28.50	1.71	- -
			PPR	21.48	19.12	2.36**	- -
	II.	1965	AWR	34.23	31.78	2.45	- -
			APR	20.31	20.44	- -	.13
			Spell.	38.31	31.16	7.15**	- -
EV-CG	I	1964	PWR	45.67	27.00	18.67**	- -
			PSR	37.00	22.71	14.29**	- -
			PPR	22.83	16.14	6.69**	- -
	II	1965	AWR	40.83	27.10	13.73**	- -
			APR	27.33	18.52	8.81**	- -
			Spell.	46.50	29.52	16.98**	- -
EA-CB	I	1964	PWR	43.43	38.79	4.64*	- -
			PSR	28.57	32.28	- -	3.71
			PPR	19.14	20.86	- -	1.72
	II	1965	AWR	36.04	36.90	- -	.86
			APR	23.11	22.96	.15	- -
			Spell.	45.64	38.34	7.30**	- -
EJ-CH	I	1964	PWR	46.46	39.89	6.57**	- -
			PSR	37.54	33.83	3.71	- -
			PPR	23.88	19.50	4.38**	- -
	II	1965	AWR	41.17	38.78	2.39	- -
			APR	26.04	22.94	3.10*	- -
			Spell.	46.17	40.72	5.45*	- -

Table 4 Results of the Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg Schools. 1965

Stream 4. Pupils who began the Phonetic Keys To Reading program in grade I in September 1964

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
School No. 1	I	1965	PWR	36.16	29.18	6.98**	- -
			PSR	27.71	29.21	- -	1.50
			PPR	18.90	18.36	.54	- -
School No. 2	I	1965	PWR	40.59	21.19	19.40**	- -
			PSR	32.22	13.31	18.91**	- -
			PPR	20.41	10.23	10.18**	- -
School No. 3	I	1965	PWR	31.45	24.80	6.65	- -
			PSR	22.68	18.87	3.81	- -
			PPR	15.22	15.53	- -	.31
EE-CN	I	1965	PWR	36.56	23.90	12.66**	- -
			PSR	24.17	16.92	7.25**	- -
			PPR	17.24	13.10	4.14**	- -
EI-CU	I	1965	PWR	29.50	29.56	- -	.06
			PSR	17.23	24.13	- -	6.90*
			PPR	13.23	13.56	- -	.33
EK-CQ	I	1965	PWR	41.68	30.74	10.94**	- -
			PSR	33.91	23.85	10.06**	- -
			PPR	21.06	15.92	5.14**	- -
EL-CD	I	1965	PWR	36.64	24.11	12.53**	- -
			PSR	26.94	18.37	8.87**	- -
			PPR	17.03	13.41	3.62*	- -
EM-CO	I	1965	PWR	44.75	27.91	16.84**	- -
			PSR	39.58	24.28	15.30**	- -
			PPR	23.46	16.25	7.21**	- -
EP-CR	I	1965	PWR	28.68	24.23	4.45	- -
			PSR	16.20	14.82	1.38	- -
			PPR	11.88	12.64	- -	.76
ES-CT	I	1965	PWR	39.44	32.74	6.70**	- -
			PSR	33.21	26.72	6.49**	- -
			PPR	20.71	18.35	2.36*	- -
EW-CF	I	1965	PWR	36.00	20.03	15.97**	- -
			PSR	25.61	13.53	12.08**	- -
			PPR	17.42	11.50	5.92**	- -
EX-CC	I	1965	PWR	38.75	23.24	15.51**	- -
			PSR	28.22	18.76	9.46**	- -
			PPR	19.62	13.48	6.14**	- -
EV-CG	I	1965	PWR	41.47	11.64	29.83**	- -
			PSR	36.28	8.84	27.44**	- -
			PPR	22.75	7.68	15.07**	- -

Table 4 Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
EA-CB	I	1965	PWR	41.17	38.56	2.61	- -
			PSR	31.57	32.24	- -	.67
			PPR	20.88	20.76	.12	- -
EJ-CH	I	1965	PWR	33.04	29.00	4.04	- -
			PSR	22.15	22.56	- -	.41
			PPR	16.56	15.84	.72	- -

Table 5 Summary of Statistical Results -- Phonetic Keys To Reading Experiment 1962-1965.

School	Stream	Grade I			Grade II			Grade III			Grade IV			
		PWR	PSR	PPR	AWR	APR	Spell	LC	RV	Spell	Speed and Accuracy	Vocab.	Comp.	Spell.
School No.1	3	*E	N.S.	*E	N.S.	*E	N.S.	- -	- -	- -	- -	- -	- -	- -
	4	**E	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -
School No.2	3	*E	N.S.	N.S.	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
School No.3	3	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -
	4	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EE-CN	1	- -	- -	- -	N.S.	**C	- -	N.S.	N.S.	*E	N.S.	N.S.	*C	N.S.
	2	- -	*E	*E	**C	**C	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	**E	**E	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EI-CU	1	- -	- -	- -	*E	*E	- -	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	2	- -	**E	**E	**E	N.S.	- -	N.S.	N.S.	*E	- -	- -	- -	- -
	3	**E	N.S.	N.S.	N.S.	**E	N.S.	- -	- -	- -	- -	- -	- -	- -
	4.	N.S.	*C	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EK-CQ	1	- -	- -	- -	*E	N.S.	- -	**E	N.S.	**E	N.S.	N.S.	N.S.	N.S.
	2	- -	**E	*E	**E	**E	- -	*E	*E	**E	- -	- -	- -	- -
	3	**E	**E	**E	*E	*E	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EL-CD	1	- -	- -	- -	**E	**E	- -	**E	**E	**E	N.S.	**E	*E	**E
	2	- -	**E	**E	N.S.	*E	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	**E	**E	**E	*E	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	*E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EM-CO	1	- -	- -	- -	N.S.	N.S.	- -	**E	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	2	- -	*E	**E	N.S.	N.S.	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	**E	N.S.	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EP-CR	2	- -	**E	**E	**E	**E	- -	**E	**E	**E	- -	- -	- -	- -
	3	**E	**E	**E	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -
	4	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
ES-CT	1	- -	- -	- -	N.S.	**C	- -	*C	N.S.	**C	N.S.	N.S.	N.S.	N.S.
	2	- -	N.S.	N.S.	N.S.	*C	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	N.S.	N.S.	*E	*E	N.S.	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EW-CF	1	- -	- -	- -	*E	*E	- -	*E	**C	*E	**E	**E	N.S.	N.S.
	2	- -	**E	**E	**E	N.S.	- -	**E	**E	**E	- -	- -	- -	- -
	3	**E	*E	N.S.	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EX-CC	1	- -	- -	- -	N.S.	*E	- -	N.S.	N.S.	N.S.	*E	N.S.	N.S.	N.S.
	2	- -	N.S.	*C	N.S.	N.S.	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	N.S.	**E	N.S.	N.S.	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 5 Continued

School	Stream	Grade I			Grade II			Grade III			Grade IV			
		PWR	PSR	PPR	AWR	APR	Spell	LC	RV	Spell	Speed and Accuracy	Vocab.	Comp.	Spell.
EV-CG	1	- -	- -	- -	N.S.	N.S.	- -	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
	2	- -	*E	N.S.	N.S.	N.S.	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	**E	**E	**E	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -
	4	**E	**E	**E	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EA-CB	1	- -	- -	- -	N.S.	N.S.	- -	N.S.	N.S.	N.S.	**E	N.S.	N.S.	N.S
	2	- -	N.S.	N.S.	N.S.	N.S.	- -	N.S.	N.S.	N.S.	- -	- -	- -	- -
	3	*E	N.S.	N.S.	N.S.	N.S.	**E	- -	- -	- -	- -	- -	- -	- -
	4	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
EJ-CH	1	- -	- -	- -	*E	N.S.	- -	**E	**E	**E	N.S.	*E	N.S.	*E
	2	- -	*E	*E	**E	*E	- -	**E	*E	**E	- -	- -	- -	- -
	3	**E	N.S.	**E	N.S.	*E	*E	- -	- -	- -	- -	- -	- -	- -
	4	N.S.	N.S.	N.S.	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

*** = Differences significant at 5 per cent level**
**** = Differences significant at 1 per cent level**
N.S. = Differences not significant
E = Differences in favour of experimental classes
C = Differences in favour of control classes

Since the amount of control of the variables for differences among pupils, teachers, and schools is limited, the summary of statistical results given in Table 5 can be interpreted only in broad terms. In grade 1, the results indicate that there are statistically significant differences in favour of the Phonetic Keys To Reading program for Primary Word Recognition (PWR), Primary Sentence Reading (PSR), and for Primary Paragraph Reading (PPR), when the Gates tests are used as measuring devices. There are about twice as many statistically significant results in favour of the Phonetic Keys To Reading program, as there are non-significant results in grade 1. In grade II, there is a trend away from the statistical significance in favour of the Phonetic Keys To Reading program established in grade 1 to one of no significant difference between the two methods. There are four cases in grade II where there is a statistically significant difference in favour of the control (conventional) method for advanced paragraph reading (APR). Under conditions where there are significant differences in favour of the Phonetic Keys To Reading Program on the one hand, and either no significance or significance in favour of the control method on the other, it might be suggested that the influence of the school is of greater importance than the influence of the method on the final results. On the whole, total results, for all schools indicate that the ratio of the number of statistically significant results in favour of the Phonetic Keys To Reading program to the number of non-significant results or results in favour of the control method, to a very limited degree, favour the conventional method of teaching reading.

In grade III, there are more results showing no statistical significant difference between the two methods than there are showing a statistically significant difference. This trend toward no significant difference between the two methods suggests that as the pupils advance through the primary grades any differences due to method of teaching reading diminish in importance.

In grade IV, the trend is predominantly toward no statistically significant difference between the two methods.

Table 6 contains average grade scores for all pupils who have completed all the tests in each of the 4 streams. The grade scores are derived from the raw scores by means of a conversion table. A statistical analysis has not been made of the grade scores as it is assumed that since grade scores are derived from the same raw scores, then the results must be similar.

Table 6 Average Grade Scores - Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading In Winnipeg Schools. 1963 - 1965.

Stream 1. Pupils who began the Phonetic Keys To Reading program in grade II in September 1962

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
EE-CN	II	1963	AWR	4.0	4.2	- -	.2
			APR	3.9	5.0	- -	1.1
	III	1964	LC	4.7	5.0	- -	.3
			RV	5.9	5.8	0.1	- -
	IV	1965	Speed	6.0	6.4	- -	.4
			Vocab.	5.5	5.9	- -	.4
			Comp.	5.6	6.4	- -	.8
EI-CU	II	1963	AWR	4.2	3.9	.3	- -
			APR	4.3	3.8	.5	- -
	III	1964	LC	4.6	4.4	.2	- -
			RV	5.5	5.3	.2	- -
	IV	1965	Speed	6.5	6.7	- -	.2
			Vocab.	5.2	5.8	- -	.6
			Comp.	6.1	5.6	.5	- -
EK-CQ	II	1963	AWR	4.4	3.9	.5	- -
			APR	4.4	4.1	.3	- -
	III	1964	LC	4.9	4.7	.2	- -
			RV	6.3	5.2	1.1	- -
	IV	1965	Speed	6.0	6.5	- -	.5
			Vocab.	5.4	6.0	- -	.6
			Comp.	6.5	5.8	.7	- -
EL-CD	II	1963	AWR	4.2	3.4	.8	- -
			APR	4.6	3.8	.8	- -
	III	1964	LC	5.9	3.6	2.3	- -
			RV	6.4	4.4	2.0	- -
	IV	1965	Speed	6.8	6.2	.6	- -
			Vocab.	5.9	4.7	1.2	- -
			Comp.	6.3	5.1	1.2	- -
EM-CO	II	1963	AWR	4.4	4.0	.4	- -
			APR	4.2	4.1	.1	- -
	III	1964	LC	5.7	4.5	1.2	- -
			RV	6.4	5.7	.7	- -
	IV	1965	Speed	5.8	5.6	.2	- -
			Vocab.	5.9	5.4	.5	- -
			Comp.	6.1	5.7	.4	- -
ES-CT	II	1963	AWR	4.4	4.7	- -	.3
			APR	4.6	5.0	- -	.4
	III	1964	LC	4.9	5.6	- -	.7
			RV	6.1	6.8	- -	.7
	IV	1965	Speed	6.8	6.6	.2	- -
			Vocab.	5.8	6.5	- -	.6
			Comp.	6.7	6.9	- -	.2

Table 6 Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
EW-CF	II	1963	AWR	4.6	4.1	.5	- -
			APR	5.0	4.4	.6	- -
	III	1964	LC	5.6	4.6	1.0	- -
			RV	7.0	5.3	1.7	- -
	IV	1965	Speed	7.1	5.6	1.5	- -
			Vocab.	5.7	4.8	.9	- -
			Comp.	6.8	6.5	.3	- -
EX-CC	II	1963	AWR	4.3	4.2	.1	- -
			APR	4.5	4.1	.4	- -
	III	1964	LC	4.8	5.0	- -	.2
			RV	6.1	6.1	- -	- -
	IV	1965	Speed	5.4	6.1	- -	.7
			Vocab.	5.9	6.0	- -	.1
			Comp.	5.6	6.1	- -	.5
EV-CG	II	1963	AWR	4.2	3.7	.5	- -
			APR	4.1	3.8	.3	- -
	III	1964	LC	4.2	4.6	- -	.4
			RV	6.2	5.5	.7	- -
	IV	1965	Speed	6.6	6.7	- -	.1
			Vocab.	5.9	5.7	.2	- -
			Comp.	6.2	6.5	- -	.3
EA-CB	II	1963	AWR	4.6	4.8	- -	.2
			APR	4.9	5.2	- -	.3
	III	1964	LC	6.1	6.0	.1	- -
			RV	7.5	7.3	.2	- -
	IV	1965	Speed	7.4	8.9	- -	1.5
			Vocab.	6.9	7.2	- -	.3
			Comp.	7.3	7.3	- -	- -
EJ-CH	II	1963	AWR	3.9	3.4	.5	- -
			APR	3.9	3.6	.3	- -
	III	1964	LC	4.6	3.9	.7	- -
			RV	5.9	4.7	1.2	- -
	IV	1965	Speed	5.7	6.0	- -	.3
			Vocab.	5.3	4.6	.7	- -
			Comp.	5.6	5.0	.6	- -

Table 7 Average Grade Scores - The Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading In Winnipeg Schools - 1963 - 1965.

Stream 2. Pupils who began the Phonetic Keys To Reading program in grade I in September 1962.

School	Grade	Year	Type of Test	Average Grade Scores Experimental(E)	 Control (C)	Difference in Favour of Experimental	 Control
EE-CN	I	1963	PSR	2.9	2.6	.3	- -
			PPR	3.1	2.9	.2	- -
	II	1964	AWR	3.7	4.3	- -	.6
			APR	3.3	4.3	- -	1.0
	III	1965	LC	4.0	4.1	- -	.1
			RV	4.9	4.9	- -	- -
EI-CU	I	1963	PSR	3.0	2.6	.4	- -
			PPR	3.1	2.4	.7	- -
	II	1964	AWR	4.2	3.7	.5	- -
			APR	4.0	3.6	.4	- -
	III	1965	LC	4.5	4.1	.4	- -
			RV	5.3	5.4	- -	.1
EK-CQ	I	1963	PSR	3.1	2.5	.6	- -
			PPR	3.3	2.6	.7	- -
	II	1964	AWR	4.7	3.7	1.0	- -
			APR	5.2	3.3	1.9	- -
	III	1965	LC	4.8	3.9	.9	- -
			RV	6.1	4.8	1.3	- -
EL-CD	I	1963	PSR	3.4	2.9	.5	- -
			PPR	3.6	2.8	.8	- -
	II	1964	AWR	4.7	4.5	.2	- -
			APR	4.8	4.0	.8	- -
	III	1965	LC	4.9	4.7	.2	- -
			RV	6.2	5.6	.6	- -
EM-CO	I	1963	PSR	3.0	2.6	.4	- -
			PPR	3.3	2.6	.7	- -
	II	1964	AWR	4.6	4.4	.2	- -
			APR	4.0	4.4	- -	.4
	III	1965	LC	5.0	5.1	- -	.1
			RV	6.8	6.1	.7	- -
EP-CR	I	1963	PSR	3.2	2.5	.7	- -
			PPR	3.5	2.5	1.0	- -
	II	1964	AWR	4.6	3.6	1.0	- -
			APR	4.6	3.2	1.4	- -
	III	1965	LC	5.1	3.7	1.4	- -
			RV	6.1	4.8	1.3	- -
ES-CT	I	1963	PSR	3.3	3.3	- -	- -
			PPR	3.4	3.5	- -	.1
	II	1964	AWR	4.6	4.5	.1	- -
			APR	4.3	4.8	- -	.5
	III	1965	LC	4.7	5.3	- -	.6
			RV	6.0	6.5	- -	.5

Table 7 Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of	
				Experimental (E)	Control (C)	Experimental	Control
EW-CF	I	1963	PSR	3.3	2.5	.8	- -
			PPR	3.4	2.6	.8	- -
	II	1964	AWR	4.7	4.1	.6	- -
			APR	4.8	4.5	.3	- -
	III	1965	LC	5.4	4.3	1.1	- -
			RV	6.8	5.5	1.3	- -
EX-CC	I	1963	PSR	3.2	3.2	- -	- -
			PPR	3.4	4.0	- -	.6
	II	1964	AWR	4.6	4.6	- -	- -
			APR	4.9	4.8	.1	- -
	III	1965	LC	4.9	5.5	- -	.6
			RV	6.2	6.7	- -	.5
EV-CG	I	1963	PSR	3.1	2.7	.4	- -
			PPR	3.0	2.9	.1	- -
	II	1964	AWR	4.7	4.3	.4	- -
			APR	3.9	3.7	.2	- -
	III	1965	LC	4.7	4.5	.2	- -
			RV	5.7	5.6	.1	- -
EA-CB	I	1963	PSR	3.2	3.1	.1	- -
			PPR	3.0	3.1	- -	.1
	II	1964	AWR	4.5	4.5	- -	- -
			APR	4.4	4.8	- -	.4
	III	1965	LC	4.9	5.8	- -	.9
			RV	5.9	6.9	- -	1.0
EJ-CH	I	1963	PSR	3.3	2.9	.4	- -
			PPR	3.6	3.1	.5	- -
	II	1964	AWR	4.7	4.3	.4	- -
			APR	4.6	4.1	.5	- -
	III	1965	LC	6.7	4.8	1.9	- -
			RV	6.7	5.7	1.0	- -

Table 8 Average Grade Scores - The Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg Schools - 1965.

Stream 3. Pupils who began the Phonetic Keys To Reading program in grade I in September 1963.

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of:-	
				Experimental (E)	Control (C)	Experimental	Control
School No. 1	I	1964	PWR	3.4	3.1	.3	- -
			PSR	3.2	3.1	.1	- -
			PPR	3.4	3.1	.3	- -
	II	1965	AWR	4.3	4.2	.1	- -
			APR	4.5	4.1	.4	- -
School No. 2	I	1964	PWR	3.1	2.9	.2	- -
			PSR	2.8	2.8	- -	- -
			PPR	2.9	2.8	.1	- -
	II	1965	AWR	3.4	4.3	- -	.9
			APR	4.1	4.3	- -	.2
School No. 3	I	1964	PWR	3.4	2.9	.5	- -
			PSR	3.2	3.0	.2	- -
			PPR	3.3	3.1	.2	- -
	II	1965	AWR	4.5	4.4	.1	- -
			APR	4.4	4.4	- -	- -
EE-CN	I	1964	PWR	3.4	2.8	.6	- -
			PSR	3.2	2.8	.4	- -
			PPR	3.4	2.9	.5	- -
	II	1965	AWR	4.3	4.1	.2	- -
			APR	4.8	4.3	.5	- -
EI-CU	I	1964	PWR	3.3	2.8	.5	- -
			PSR	2.8	3.0	- -	.2
			PPR	3.2	3.0	.2	- -
	II	1965	AWR	4.3	4.4	- -	.1
			APR	4.3	3.4	.9	- -
EK-CQ	I	1964	PWR	3.5	3.1	.4	- -
			PSR	3.5	2.9	.6	- -
			PPR	3.9	3.1	.8	- -
	II	1965	AWR	4.6	4.2	.4	- -
			APR	4.9	4.5	.4	- -
EL-CD	I	1964	PWR	3.4	2.6	.8	- -
			PSR	3.2	2.5	.7	- -
			PPR	3.7	2.3	1.4	- -
	II	1965	AWR	4.4	3.8	.6	- -
			APR	4.2	3.8	.4	- -
EM-CO	I	1964	PWR	3.3	2.8	.5	- -
			PSR	3.3	2.7	.6	- -
			PPR	3.3	2.8	.5	- -
	II	1965	AWR	4.3	3.9	.4	- -
			APR	4.5	4.3	.2	- -

Table 8 Continued

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of:-	
				Experimental (E)	Control (C)	Experimental	Control
EP-CR	1	1964	PWR	3.4	2.2	1.2	- -
			PSR	2.9	2.2	.7	- -
			PPR	3.2	2.3	.9	- -
	II	1965	AWR	4.5	2.9	1.6	- -
			APR	4.5	3.2	1.3	- -
ES-CT	I	1964	PWR	3.4	2.9	.5	- -
			PSR	2.9	2.9	- -	- -
			PPR	3.1	3.1	- -	- -
	II	1965	AWR	4.5	4.1	.4	- -
			APR	4.3	3.9	.4	- -
EW-CF	I	1964	PWR	3.3	2.6	.7	- -
			PSR	3.0	2.6	.4	- -
			PPR	3.0	2.7	.3	- -
	II	1965	AWR	4.6	3.7	.9	- -
			APR	4.4	3.9	.5	- -
EX-CC	I	1964	PWR	3.3	2.7	.6	- -
			PSR	2.8	2.7	.1	- -
			PPR	3.2	2.9	.3	- -
	II	1965	AWR	4.0	3.8	.2	- -
			APR	3.9	4.0	- -	.1
EV-CG	I	1964	PWR	3.5	2.5	1.0	- -
			PSR	3.1	2.5	.6	- -
			PPR	3.3	2.5	.8	- -
	II	1965	AWR	4.7	3.5	1.2	- -
			APR	5.0	3.8	1.2	- -
EA-CB	I	1964	PWR	3.3	3.1	.2	- -
			PSR	2.8	3.0	- -	.2
			PPR	3.0	3.3	- -	.3
	II	1965	AWR	4.4	4.4	- -	- -
			APR	4.4	4.3	..1	- -
EJ-CH	I	1964	PWR	3.5	3.1	.4	- -
			PSR	3.3	3.0	.3	- -
			PPR	3.7	2.8	.9	- -
	II	1965	AWR	4.8	4.5	.3	- -
			APR	4.9	4.4	.5	- -

Table 9 Average Grade Scores - The Phonetic Keys To Reading Program and The Conventional Method of Teaching Reading in Winnipeg School - 1965.

Stream 4. Pupils who began the Phonetic Keys To Reading program in September 1964.

School	Grade	Year	Type of Test	Average Grade Scores		Difference in Favour of:-	
				Experimental (E)	Control (C)	Experimental	Control
School No. 1	I	1965	PWR	3.1	2.6	.5	- -
			PSR	2.7	2.8	- -	.1
			PPR	2.7	2.8	- -	.1
School No. 2	I	1965	PWR	3.1	2.2	.9	- -
			PSR	3.0	2.1	.9	- -
			PPR	3.1	2.1	1.0	- -
School No. 3	I	1965	PWR	2.7	2.4	.3	- -
			PSR	2.5	2.4	.1	- -
			PPR	2.5	2.5	- -	- -
EE-CN	I	1965	PWR	2.8	2.4	.4	- -
			PSR	2.6	2.3	.3	- -
			PPR	2.7	2.3	.4	- -
EI-CU	I	1965	PWR	2.6	2.6	- -	- -
			PSR	2.2	2.5	- -	.3
			PPR	2.3	2.3	- -	- -
EK-CQ	I	1965	PWR	3.1	2.6	.5	- -
			PSR	3.1	2.5	.6	- -
			PPR	3.3	2.5	.8	- -
EL-CD	I	1965	PWR	2.9	2.4	.5	- -
			PSR	2.7	2.3	.4	- -
			PPR	2.7	2.4	.3	- -
EM-CO	I	1965	PWR	3.4	2.6	.8	- -
			PSR	3.4	2.7	.7	- -
			PPR	3.7	2.6	1.1	- -
EP-CR	I	1965	PWR	2.6	2.3	.3	- -
			PSR	2.2	2.2	- -	- -
			PPR	2.2	2.3	- -	.1
ES-CT	I	1965	PWR	3.1	2.8	.3	- -
			PSR	3.0	2.8	.2	- -
			PPR	3.2	2.9	.3	- -
EW-CF	I	1965	PWR	2.9	2.2	.7	- -
			PSR	2.7	2.1	.6	- -
			PPR	2.7	2.2	.5	- -

Table 9 Continued

School	Grade	Year	Type of Test	Average Grade Scores Experimental (E)	Average Grade Scores Control (C)	Difference in Favour of:- Experimental	Difference in Favour of:- Control
EX-CC	I	1965	PWR	3.0	2.3	.7	- -
			PSR	2.7	2.3	.4	- -
			PPR	2.9	2.4	.5	- -
EV-CG	I	1965	PWR	3.2	2.1	1.1	- -
			PSR	3.3	1.9	1.4	- -
			PPR	3.6	1.9	1.7	- -
EA-CB	I	1965	PWR	3.1	3.0	.1	- -
			PSR	3.0	2.9	.1	- -
			PPR	3.2	3.1	.1	- -
EJ-CH	I	1965	PWR	2.8	2.6	.2	- -
			PSR	2.4	2.5	- -	.1
			PPR	2.6	2.5	.1	- -

Conclusions - Part B

1. The results show that for the 12 experimental and 12 control schools where no equating of schools, pupils, and teachers was made, there is a significant difference in favour of the Phonetic Keys To Reading program for Primary Word Recognition (PWR), Primary Sentence Reading (PSR), and Primary Paragraph Reading (PPR) as determined by the Gates tests in grade I.

2. In grade II, the number of significant results in a favour of the Phonetic Keys to Reading program is about equal to the number of results showing no significant difference or, significance in favour of the control method when the Gates Advanced Word Recognition (AWR) and the Gates Advanced Paragraph Reading (APR) tests are used as standards.

3. In grade III, no marked trend can be observed in the statistical analysis which would favour one method or the other.

4. In grade IV, after the pupils have been removed from the experimental program for one year, the trend established in grade III, i.e. no statistical differences between the two methods, is maintained.

THE WINNIPEG SCHOOL DIVISION NO. I
Superintendent's Department

June 30, 1965.

PHONETIC KEYS TO READING - Comments

Controlled Experiment

After teaching the Phonetic Keys to Reading method for three years I fully endorse my previous statements and convictions that this is an excellent method and that it provides a good basic foundation. I have taught primary reading for many years and I am fully convinced that a phonetic program in reading is a must. If a child cannot attack new words, usually he skips over them losing the meaning and continuity of the story and as a result does not like to read.

To be effective this method requires thorough teaching and much drill on sounds and skills. Two very slow readers this year have become reasonably fluent. Because they can attack new words they read independently and are now interested in joining the library.

My class has read many supplementary readers gaining much knowledge from science and social studies stories. The more they read the more searching they become.

True, grade I children do not read stories for some eight to ten weeks because they take the sounds of the vowels and consonants first but I am sure they have a much better foundation and learn to read better. In the end they are much farther ahead.

Children do not become confused with sounds and exceptions. It is a learning process they accept.

I am of the opinion there is no one definite reading program suitable to the needs of every child but I feel the Phonetic Keys to Reading is most valuable and I would like to go on using it.

After teaching reading at the grade III level using the Phonetic Keys to Reading, for two years I have found that the children have developed a technique of reading that has made them independent and fluent readers and good spellers.

I do not consider that the phonic or sounding method of reading as practiced by Phonetic Keys to Reading is a cure-all for all reading difficulties, but I believe that any child who does not develop a technique of sounding words will be handicapped in reading and spelling somewhere along the line. It has been my experience that when sounding phonics is taught together with an accepted method of sight reading, starting the first day of school in grade I, the children become independent, rapid readers and good spellers.

Phonetic Keys to Reading is a well-organized program which provides frequent repetition of the phonetic principles. As a result of this program, some children are able to read independently at an earlier age.

However, some children have a great deal of difficulty remembering the rules. Some children find the grade I program too extensive. Fluency in oral reading is slow and hesitant.

Phonetic Keys to Reading emphasizes word attack above the comprehension of the word. This is contrary to the basic principles of a reading program.

If we are to take advantage of the child's eagerness to read, we must teach a vocabulary of sight words first.

If we are to cultivate a love of reading, we must have a program that contains words that are meaningful to the child.

If we are to develop a habit of reading, we must have stories that are of interest to the young readers.

Therefore, I am looking forward to a new or revised basal reading series that has more phonics introduced earlier in grade I for earlier independence, but not to the exclusion of comprehension, which is after all, the heart of any good reading program.

My impressions of the grade III program are much the same as those for grade II.

Stories are uninteresting. Children preferred stories in other series to those in Phonetic Keys to Reading. After three years, the brighter children were bored with the material presented.

Comprehension skills are not sufficient. The teacher must prepare a great deal of material in order to meet the needs of pupils. Weak pupils still read at a slow rate. I was not pleased with the oral reading while using the Phonetic Keys to Reading books. However, it improved considerably while reading other series.

Weekly tests in spelling indicated that brighter children were slightly better. Weak pupils still make considerable mistakes.

I feel the class, as a whole, has done quite well throughout the three years I have had them. However, I feel the credit is not due to Phonetic Keys to Reading alone. The majority of these children have developed good work habits and put the utmost into all their work. They are doing as well in the rest of the subjects.

Thirty-five children (three of whom entered the course November 1) have completed this program as well as having read Basic Curriculum plus several supplementary books.

Vowels and consonants were put to use with a fair amount of ease but I do think some of the digraphs and spellings proved difficult to remember for several of my class III children. I think too much drill on this part of work seemed tedious.

On the whole, the children enjoyed the program, but perhaps due to a more mixed grouping this year, the program seemed to take a little longer to complete this year.

Thirty-three children completed the year with me. Of these, ten were new to Phonetic Keys.

Every child completed the program and read the two basic reading texts along with supplementary readers.

Again, I must say I like the phonetic approach to reading at the grade II level. The course needs to be supplemented with many comprehension and thought-provoking exercises. With these additions the children become intelligent, fluent readers. They are independent readers and make good use of the library facilities.

It was a pleasure teaching Phonetic Keys to Reading during the past year. I found that the children developed a high independence in attacking new words, even more so, among those who had taken Phonetic Keys from the inception of the course. Sounding consonants, vowels, consonant blends and digraphs presented no difficulty to the children in recognizing them in a word. I feel that the children developed a healthy attitude to reading since they were able to master the basic skills. However, reading taught in such a mechanical way, I feel, serves little, if the children are not provided with stimulating exercises whereby they can apply what they learned. For this reason, I formed a reading club and each child had to write, voluntarily, stories they read from books in the classroom library. This helps in developing their comprehension to a certain extent. Such a program must be carefully planned and organized so that the slower readers will not become frustrated. If there were more comprehension exercises in the course or if it were supplemented with a workbook of comprehension exercises, I feel the course would be a worthwhile one.

I think, though, that reading taught in an orthodox way does little in enabling most children to read with efficiency because no two children are alike.

Others

The Phonetic Keys method of teaching reading helps the child to gain independence in reading. The word attack skills which the child knows stimulates a greater interest in reading books above his grade level.

There are many weak points to this program. The course is definitely too heavy for the slow learner. The immature child, who may be very bright, seems to have a great deal of difficulty.

There are some children at the grade I age level who cannot hear many of the sounds they are taught and expected to apply.

The program puts too much emphasis on the word attack skills and offers no experiences in comprehension, inferences, sequences and others.

The Phonetic Keys to Reading program helps children to become independent readers through the use of word attack skills. They can read material which is at a higher level than the regular grade III program would prepare them for.

However, in a great many cases, the thought contained is lost because the child becomes involved with the mechanics rather than the meaning behind it. The skills become too complicated for the memory of the average child to retain. These word-attack skills should be simplified so that the reading program can be enjoyed by the class as a whole. Then the confidence and independence gained in attacking words will help the child to become a more fluent reader without a loss in reading comprehension. There should also be more provision made for exercises in reading comprehension as the present ones are quite inadequate.

Pupils who have taken Phonetic Keys to Reading have become independent readers. However, the pupils who have less ability to learn cannot grasp so many phonetic rules. Many of these rules apply to very few words.

Having taught the Phonetic Keys to Reading for two years, my observations are as follows:

1. It gives the pupils a positive approach and deals realistically with reading problems.
2. It is geared to the developmental needs and characteristics of children.
3. The children have the initiative to look up pertinent information in books.
4. It gives them an early mastery of spelling skills.
5. It provides pupils with the tools to sound words.
6. It provides the stimulus to reading books other than classroom textbooks.

7. It gives the boys and girls the ability and desire to read thus launching them for a satisfying and rich experience with books.
8. The concrete evidence of academic growth in reading skill is revealed at the end of the year.

After teaching the Phonetic Keys to Reading program for one year I have the following observations:

1. The class reads fluently with little or no hesitation when meeting a new word.
2. They seem capable of analyzing new words quite quickly.
3. The material they are able to read is far beyond their age and grade level.
4. The ability of the class to attack new words in spelling is aided by the phonetic principles they have learned. The problem that arises here is that not all words are phonetic.
5. The class, in general, has a keen interest in books and they do a great deal of extra reading.

I have enjoyed teaching Phonetic Keys to Reading for the last three years. I think the children have more phonetic skills than sight readers and are very eager to read on their own because they have the power to attack new words readily.

The Phonetic Keys to Reading program is very heavy in grade I. Almost all of the sounds and rules are taught in grade I, with grades II and III being primarily review grades. This is too much for the slow children to grasp in grade I. In grades II and III the children are very bored going over the same sounds and rules.

While the children have a great number of word attack skills at their command, their oral reading and comprehension are not as good because too much emphasis is placed on phonics. The workbook has very few comprehension pages.

This year I have taught a grade III class. They have been taught by the Phonetic Keys to Reading method since grade I. I have found that although they enjoyed the books and stories, they were quite unchallenged by the phonics. Due to the fact that so much phonics were taken in the previous two years, very little was left for the third year. With an average group a good deal of time can be spent reviewing the previous year, but with a good class this proves to be uninteresting.

I do not feel that enough time was spent on comprehension in grades I and II, and that the phonics was too concentrated in the grade I area. Apart from this I have enjoyed the course and have enjoyed teaching it.

I have taught Phonetic Keys to an "A" class this past year and have enjoyed it thoroughly. The children are reading at a high level and show a keen interest in reading. I feel that Phonetic Keys is more challenging to above-average children. They read independently and fluently earlier in the year.

My bottom group (average children) did need help in sounding out quite a few of the words. Otherwise, they had no difficulty with the program.

During 1964-65 progress in reading was excellent. Average scores attained by pupils in groups I and II (26 students) on Gates reading tests exceeded the grade IV level.

In September 1964, I received four pupils who had done Basic Reading during their grade I year. They completed "All Around" (1^2) during the first term, then proceeded with the regular course for grade II. Average scores Gates reading --4.5, June 1965.

Four weak pupils who completed grade I with "D" standing June 1964 also worked with "All Around" during the first term, then continued with grade II course. Average scores Gates reading --3.5, June 1965.

Interest in reading is high. Twenty-seven of the 30 pupils in this room are members of the local public library!

I have taught the Phonetic Keys to Reading program for the past two years. It has been a real challenge. The manual is well-organized.

The children have learned to apply the phonetic principles very well. They read far beyond their level. Their vocabulary is fantastic, considering some are only eight-year-olds. They enjoy reading and using the new words learned in "Wide Doors Open". Even the slower children feel confident and proud that they too can pick up almost any book in our class library and read it. When they are confronted with a new and difficult word, they want to try it themselves rather than be told what it says. If they don't know its meaning, they are eager to use the dictionary or be told what it means. During the year, the children have made it a game to bring new words to school and use them in their creative stories and sentences. They use the encyclopedia and try to "stump" the teacher.

The children's spelling appears to be much better in comparison with those having the Curriculum Foundation Series.

Although the phonetic approach to reading is good, I feel it also has its weaknesses. The course contains too much repetition of material. Some stories lack interest and significance. Far too many words need to be analysed before the actual reading. Some words are of no value to a grade III child. There are too many rules with exceptions. The books lack exercises necessary for developing critical and creative thinking. Also, the books are too large and cumbersome for the children to handle with ease.

I have taught Phonetic Keys to Reading to a grade III class this year. Some of the better pupils have reached a high degree of efficiency. They are able to read the words fairly fluently, except one boy of average ability who reads very slowly and depends on sounds.

In general, I like the program, and the children find the stories interesting. It would be of great value to have more pages testing comprehension.

I have found the Phonetic Keys to Reading program to be very effective in the teaching of reading. The children have great confidence in themselves and are seldom hesitant about trying a new word. I have also found that this program improves the spelling.

Phonetic Keys like any other reading program has its advantages and disadvantages. One of its greatest advantages is that it makes the child very independent when it comes to reading silently. The class this year were able to read and enjoy most of the books from our library. By the end of the year they are ready to attack any new word. One great disadvantage is that the course in grade I is very heavy and seems geared to the bright learners only. The slow learner experiences difficulty in learning all the vowel and consonant sounds, let alone all the blends, digraphs, etc. This sytem also tends to make them less fluent in oral reading, although, I found with giving them extra supplementary reading once a week, they showed a great deal of improvement.

The workbook part of phonetic keys, especially the first two, deals mostly with work on sounds and not enough on comprehension.

I thoroughly enjoyed phonetic keys, and although I would hesitate to say it is the perfect way to teach reading, I would still like to see vowel and consonant sounds introduced early in grade I and children taught to blend sounds into words.

I have had one year's experience in teaching the Phonetic Keys program to a grade III class.

The progress, of course, depends on how much re-teaching the class needs. Before we attempted new concepts we reviewed all the old ones. Therefore, the progress depends on the amount retained from the previous years.

It was thrilling to witness the attack the children made on new words. However, I felt the theory was quite concentrated before we really enjoyed the daily reading program. I also felt that we were pointing out to our pupils that our language is not entirely phonetic. We were continually saying, "This is how it sounds, but this is how it is spelled."

I did enjoy the year's teaching and I feel that a second year could be more successful.

In September I was assigned to teach a class of 34 grade I pupils to read using the Phonetic Keys method. In June I am happy to report this group completed the program. Thirteen pupils covered the first level of grade II.

I was impressed with the systematic way in which the lessons were developed. Each lesson has plenty of repetition, which enabled the slowest group to grasp the phonetic skills and to make daily progress.

The charts, picture and word cards are sufficient to assist in developing the lessons. There are work pages in the books, and the method provides ample ideas for valuable seatwork.

The grade I program is extensive and requires thorough and consistent teaching. The third book, "All Around with Dot and Jim" could be omitted the first year if the group is slow.

The children quickly developed independence and were thrilled to discover they could read other books. In January they were clipping news items from the daily paper and reading them to their class.

My pupils created stories and letters, as they had no difficulty spelling the necessary words. The whole class became enthusiastic readers as their power to read increased. The library was a valuable source of activity.

The Phonetic Keys method offers valuable assistance, but like every method, it is not perfect. There are too many rules to learn in one year. These rules do not always apply to some words. Therefore, the children had sight words to remember.

Teaching reading by this method is a challenge and rewarding experience. However, I do not advocate using this method alone, but a combination of methods to help the individual pupil.

We see another year end closing, and as I look back, I can see the marked progress the children have made. I firmly believe that Phonetic Keys bring better results than the ordinary reading program we have been following for so long. I find that the children can attack new and different words with ease without the help of the teacher. Even though there are a great amount of rules to learn, by the constant repetition as it is laid out in the program, the children remember them and acquire the necessary skill to use them.

One improvement could be made with this program. Our job could be aided if a book (workbook or a phonics book) was supplied that followed the rules as they are laid out in the program.

I have enjoyed teaching Phonetic Keys to Reading during the past year. I have followed closely the excellent lesson plans provided in the teacher's manual and have also made very good use of the word cards.

My pupils have progressed quite well in oral reading and in reading skills.

They have read many supplementary books during the year and I find them well equipped in word attack skills. The reading interest is maintained at a high level because there is no repetition and the stories are always fresh and new.

They show a great desire to read library books, even those which contain words beyond their grade level.

In their written language they are capable of turning in quite acceptable paragraphs and will tackle almost any word independently largely through the skills learned from phonetic keys. These words are, of course, often misspelled but their meaning is quite clear.

I am definitely in favor of Phonetic Keys to Reading.

I enjoyed teaching the Phonetic Keys program this year. Through it the children develop independence in their reading. They develop skills which enable them to attack a strange word with no fear. The method provides the children with basic rules and with plenty of opportunities to apply these rules. The stories are interesting and easy to understand.

The children like Phonetic Keys and, in my opinion, benefit greatly from the use of it.

This was my first year of teaching and also my first introduction to the Phonetic Keys system of reading. When the children in my class entered grade II, I found they had excellent recognition of sight words, but they could not seem to read sentences without stopping at nearly every word. We began our grade II program by reading "Through Happy Hours". As we gradually reviewed all the work taken in grade I, I found that the children enjoyed the phonics classes immensely. The teacher's guide was very helpful, and provided many new ideas for approaching phonetic rules. The children in my room had retained a great deal of knowledge from the grade I program, and they enjoyed applying these rules and methods of attack to new words introduced in "Through Happy Hours". By the time we had completed the first Phonetic Keys book, the children were reading very fluently. We then took "Friends and Neighbours", and I found they could read this easily with little or no help from me.

"As Days Go By" was begun after Christmas, and although many new rules were introduced, the children enjoyed learning new things about the words. The program provides plenty of review, and too much was never introduced at one time. The word cards made available by the system were quite valuable, and I found them very helpful. By the time we completed "As Days Go By", the children could read almost anything I presented to them. The comprehension was excellent. Although they sometimes had difficulty with the meanings of words, I found if I used them in a sentence, they could usually retain the meanings. We read "More Friends and Neighbours" with no problem, and the children by now had developed good expression and could comprehend everything they read.

We were able to read several supplementary books this year, and it was a real pleasure to see the children pick up a new book and be able to read it without much help from anyone else.

I thoroughly enjoyed teaching the Phonetic Keys program, as I found it to be very effective. The guide book was excellent, and the stories in the children's readers were all well chosen. I found my children could write stories without asking for spelling help. They could sound out words, and loved to apply rules to unfamiliar words.

I have enjoyed teaching the Phonetic Keys to Reading program in grade I. I find that the children taught by this method become very independent readers. Most are quite able to make out words and read widely.

There are, however, a few things that are taught that would seem to be better left until the second or third year.

With regard to the Phonetic Keys to Reading program, I feel the bulk of the mechanical work has been done at the grade I and II levels. By the time the children reach grade III a levelling off takes place. The grade III program should afford time for additional reading. The work of this grade could be supplemented with a vital and interesting comprehension program.

I have taught the Phonetic Keys series for the past three years, graduating with my class year by year -- this year completing the grade III program.

Although I found the Phonetic Keys to Reading a refreshing change from "Go, go, go!" and "Oh, look, look!" it does not solve all the problems of teaching the slow child to read. The class I conducted this experimental course with ranged in ability from slow to average, with a few brighter children added to the class from another room for grade III.

It is difficult to make the sound of the consonants interesting to the very slow pupils, although when mastered they can read or attack anything at their level. It does not solve all the spelling problems although children will attempt any words when writing stories. I think the result in spelling is about the poorest I have ever had.

This program helps the children more quickly to become independent readers. The program stresses the function of words, phrases and sentences which can be supplemented with exercises and activities in the language program. I found the sets of seatwork "Adventures in Wordland" to be excellent for supplementing the few exercises in the readers.

The course for grade I was very extensive, but I felt that very little new material was presented for grade III and could be omitted as far as the bright children were concerned. The review was needed for the slower readers. I do not care for the type of reader. They are very difficult for the children to handle and I felt that the stories lacked interest.

The Phonetic Keys to Reading experiment is an interesting and rewarding one from my point of view. Like any other program, it seems to have many strengths and several significant weaknesses.

The program has certainly given my class tools for independent reading. Never before have I had a class of seven and eight-year-olds where at least half the boys are well on their way through the "Hardy Boys" series. They stop only to ask what words like "coupe" or "preliminary" mean, usually pronouncing them correctly.

Generally speaking, the differences between Phonetic Keys to Reading and Curriculum Foundation seem to be disappearing by the end of grade III.

The spelling, which was so good in grades I and II, has levelled off, probably because most words, while easy to analyze, could follow any of several rules, and still be correct phonetically.

Also, there doesn't seem to have been time to develop habits of comprehension and application and this is beginning to become a handicap to my grade III students.

I do feel that the program could be modified to provide more time for the teaching of comprehension skills. Perhaps the first two years of Phonetic Keys to Reading could be spread over a three-year period, and the grade III books left out entirely. (There is very little new material in them anyway.)

Having used it only with "A" to "C" classes has not given me an over-all picture, but I definitely feel that Phonetic Keys to Reading is on the whole, practical, effective, and conducive to that attitude of independence and self-reliance that we so often find lacking in our pupils.

My experience with this program consists of two years with lower grade I classes. This year's class, the lower of two, ranged from 1.47 grade score to 4. in the Gates Reading Achievement Tests given April 27. Out of 31 pupils, 15 were in the 3 to 4 grade score range; 14 pupils in the 2 to 2.9 grade score range; and the remaining 2 in the 1.47 to 2 grade score range.

This program gives the children terrific power to discover new words, builds early confidence and a desire to read, as evidenced by the extensive use of the class lending library and the public library, and exposes them to a multitude of new words. Their reading horizon is greatly extended and the ability to spell increased.

I am not too taken with the story material in the program and I certainly would have appreciated workbooks to use as seatwork, having spent many hours preparing work to help fix rules and develop sequence, comprehension and influence.

I am of the opinion, also, that the syllabication and accent cause an overload in grade I and could be deleted.

I used concentrated phonics in my earlier teaching experience which perhaps gave me some advantage. At any rate I enjoyed the challenge of a new program, and resulting knowledge that the children can read, not only a few set words, but anything within their range.

This is the third year I have taught the Phonetic Keys program. I have used it through the first three grades and so I am completely familiar with the progression. The skills are all taught at the first grade level and here it is most effective with a bright class.

This year I had a group of top grade I's and medium grade II's. Both groups made very satisfactory progress.

We gave our Gates Reading Tests on April 27. In grade I, the reading grade average ranged from 2.5 to 3.9 with most of them at the 3.7 level. In grade II, the reading grade average ranged from 3.8 to 5.0.

The system of introducing the vowels and consonants in "Tag" is excellent. Mature children grasp and use the phonetic skills in spelling, printing sentences and even stories. They can attack many new words in reading.

On the other hand, I believe it might be too heavy a program for a slower child to the point that he could become so involved with word building that he could lose all interest.

Because the emphasis is so heavily weighted to phonetic skills, comprehension and fluency could suffer unless supplemented by the teacher.

This series needs a workbook to develop a well-rounded reading program. The children need experience in recognizing "true-false", "best answer", sequence-making inferences, etc.

There is one over-worked word in my vocabulary -- the word "usually" which must preface almost every phonetic rule in our quite unphonetic English language.

In spit of this, I have enjoyed teaching the Phonetic Keys program. It was an interesting change.

I have taught Phonetic Keys for the first time during the past year in grade I. The average children made satisfactory progress, but the slow children found it extremely difficult. Sounds had no meaning for them. They were not in the least interested in trying to attack words. Reading was so labored that it held no interest for them.

I found that generally comprehension was not as good as it should have been and that the reading was inclined to be wordy.

I feel that the reading program is much too heavy in grade I and there are far too many keys for children so young to remember. The bottom group did not complete the year's work.

This approach to reading is suitable for the majority of children. Some of them with higher intelligence did better than others but these would learn by any method.

On the whole, the oral reading was halting and lacked expression at the beginning of grade II. However, during the year half the children improved considerably. The slow readers made only a slight improvement in oral reading.

Comprehension was satisfactory. It was particularly interesting to see that this class read library books extensively throughout the year and enjoyed doing so.

The stories in "Through Happy Hours" and "As Days Go By" were modern, up-to-date and appealed to the children more so than in my opinion the out-dated "Friends and Neighbours" series.

During the past school year I taught grade III Phonetic Keys to Reading.

In my opinion, this is an excellent reading course. The child is able to progress more rapidly because he has at his disposal reading skills which he has been utilizing since grade I. Thus by the end of grade III the child has a thorough knowledge of skills ordinarily introduced only in grade III.

I am also of the firm belief that this is a superior method because the child is more independent in sounding out words both in reading and in spelling.

I do, however, feel that for the average child there is not enough new material in the grade III course. Some children tend to become bored by the repetition.

Considering the advantages this course offers, I would recommend it be continued.

I have enjoyed teaching the Phonetic Keys to Reading program in grades I and II.

The grade II children came to me with a firm foundation in phonetic skills. Reading to them was a joy, not a chore.

The grade I class moved slowly at first. After the vowels were mastered they went ahead by leaps and bounds. These children learned easily and the grade I program was not too heavy for them. Slower children find it difficult to cover so much material in the first year.

The use of Phonetic Keys to Reading has been a great challenge. I feel that a majority of the children have gained in independence and ability to sound out words that are unfamiliar. These skills have shown an improvement and an aid in the ability to spell.

The greatest problem this year, because of a large and good class, was to make sufficient and varied seatwork. The readers do not contain enough work for the pupil to do after each lesson.

This is my first year using the Phonetic Keys to Reading course. My room has two grades, an average grade III taught using the Curriculum Foundation method and the school's slowest grade II group taught using the Phonetic Keys method.

On the "positive" side I find that the teaching of phonetic skills and the drills on phonetics which are an integral part of this program do give the children the ability to attack new words effectively.

The very slowest children, however, have more difficulty with syllabication and accent.

On the "negative" side I found that I could not "cover" the two Phonetic Keys to Reading readers for grade II in the number of weeks suggested in the teacher's guidebook.

Two other areas occur to me in which the teacher must be vigilant:

(a) It is necessary to give a great amount of practice in reading comprehension over and above that given in the readers.

(b) While learning to dissect words phonetically is good, this cannot be "overdone". The child cannot stop to sound out a word while doing oral reading without developing into a halting reader.

Knowing I was about to write this, I handed the class "What's Next?" to be read without the usual preparation of word study, discussion of locale and characters, etc. Nor did I use the "guided reading" technique. As a sight reading exercise the results were quite satisfactory with regard to fluency with the exception of a boy who is not an average pupil.

I have had experience teaching Phonetic Keys to Reading in grade II and III. I feel it is a worthwhile program. I feel that the majority of children taught by this method have gained much in independence and ability to apply phonetic skills to sound out words which are unfamiliar to them. If the grade I program is thoroughly taught, I feel it could be applied to any set of readers. Grade II and III is mainly only repetition for reinforcement. I have worked with some children who have below average intelligence and even they have done well in basic reading tests. Most second graders have scored between grade IV and V reading ability according to the Gates test.

On the contrary, words such as insistent, loyalty, dependent, naught, youth, exempt, pledge are presented in grade II for word analysis. Such words are beyond the vocabulary and experiences of a second grade child.

I also believe that there are too many rules for the children to learn. Syllabication and accents are introduced in grade II. The children must learn rules pertaining to accented syllables, for example, "ey" has a long sound if it is accented and a short "i" sound if it is unaccented. Rules such as this one, are most difficult for children at this point.

Another weakness of Phonetic Keys is the lack of a workbook. The readers do not contain enough work for the children to do after each lesson. They need more experience in comprehension, inferences, comparison, sequences, etc. As a result the teacher must work continuously making comprehension exercises so that the children will get practice in reading questions, answering them and learning to follow directions.

Phonetic Keys is a method for teaching children to read. I don't believe it is the only method. There may be others developed which will be equally good or better. However, I firmly feel that children should be taught phonics.

I have enjoyed working with the Phonetic Keys series for the past six months. I find that once the children are able to analyze the words, they become quite independent as they find great satisfaction in discovering new words. These children become good readers and also have no difficulty with their spelling.

The slow learners that have completed the grade I Phonetic Keys program, are better able to attack new words at the grade I level. They do not guess at the new words as they are able to master sounds and they feel they are accomplishing things by themselves.

I have taught Phonetic Keys to Reading in grade I for two years and I like it very much. I can understand that by the end of grade III there is not a great deal of difference or comparison between Gage and Phonetic Keys. However, at the end of grade I there is much to compare. Some of the comparisons I have made are:

(1) The independence the child obtains with the Phonetic Keys method as compared to that of the Gage method in which not even the vowels are introduced until grade II.

(2) The creativeness the child acquires with Phonetic Keys is outstanding as compared with the Gage method. The child in Phonetic Keys needs no longer to rely on a limited vocabulary. Included with this is spelling which, although it is not included in the basic program as a major subject, is still very important to grade I children. They can understand from phonetic analysis why a word is spelled a certain way rather than remembering the spelling of it strictly from memory alone.

(3) The children enjoy reading so much more, as they constantly have the satisfaction of achievement entirely on their own.

I have heard complaints in regard to the fact the child does not begin reading a story from a book soon enough. They fail to realize that the supplied charts are specifically for this purpose. If these are not sufficient for the class, there can be no harm in the teacher constructing charts of her own. In other methods of reading, the teacher has always had to supplement extra work to provide the skills and needs the student requires to succeed. Phonetic Keys is not different from my other method in this respect.

I believe there is too much emphasis put on the fact that the sounds do not need to be mastered in grade I. The sounds do need to be mastered, as one sound leads to another and if mastery is not obtained the end result is failure.

I know some children cannot learn to read entirely by phonics alone and some children may never use phonetic analysis or hear a phonetic sound. In these cases the "sight" method may be the answer. We, as teachers, must use good common sense.

There is a place for both "sight" and "phonics" in our reading program.

As a grade I teacher I am concerned with the program which produces the best results for grade I. I feel that the Phonetic Keys program is excellent for the early independence it gives to the child. He can pick up a book and read because he has the "phonetic keys" to "unlock" unfamiliar words. He can write creatively because he no longer has to ask how to spell simple, yet unfamiliar, words. This course is also meritable in the teaching of spelling.

I do feel, however, that this course is extremely heavy for the slow learners. Is it not possible that two-thirds of the course is sufficient in this case?

I think that we tend to over-emphasize too much phonics or too much sight reading. The teacher should be free to use wise judgment in the case of each individual child.

For example, if a child is hindered by the phonetic approach due to a speech impediment, then let's teach him to read regardless of which method or technique is used. The main concern is to teach the child to read well and independently.

Is it not possible to allow the teacher to use her own discretion and teach with the phonetic keys plus sight reading and therefore have a good balanced program?

I have taught grade I Phonetic Keys to Reading for three years, to both slow and average children. I feel that the inclusion of articulated phonics in the teaching of reading adds a great deal to it. The children become independent readers and derive great satisfaction from being able to read new words without the help of the teacher.

Although this series is an excellent one I do feel that the grade I program as it now stands, is too heavy. There is too much to teach and the stories are too long; in some cases it seems like a continual push trying to get everything done. There is not enough time for discussion and little for extra activities that can branch out from reading. Having to hurry along takes away some of the enjoyment and fun.

I think that children taught articulated phonics have an advantage over those without this experience. The use of library books and supplementary readers in a Phonetic Keys to Reading room prove this. The children really read them.

This has been my third year teaching Phonetic Keys to Reading so my comments would tend to be the same as those on my previous written reports.

However, this term I had an experience somewhat different from other years. Approximately half of my children came into my class from other schools and had not been previously exposed to Phonetic Keys to Reading. These children, in my opinion, gained more than would be normally expected in their ability to read independently and have shown a surprising improvement in their reading interests.

The Phonetic Keys to Reading approach to reading seems to allow children to read more independently than the standard method. The children attempt to spell harder words and thus can have a wider vocabulary range in written English.

Several children who came into the room not having previously used Phonetic Keys to Reading were assimilated into the program fairly easily.

I do think, however, that the course as it stands is too rigid. The principles applied to the regular reading course or any supplementary series would perhaps be more functional.

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APPENDIX H

REPORT ON THE
PHONETIC KEYS TO READING EXPERIMENT
CONDUCTED BY
THE FORT GARRY SCHOOL DIVISION NO. 5

(Includes Introduction and principal statistical tables only)

OCTOBER, 1965

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FORT GARRY SCHOOL DIVISION NO. 5

A PROGRESS REPORT

on

An Experiment in the Teaching of Reading in Grades I, II, and III

Experimental Program	-	Phonetic Keys to Reading published by the Economy Publishing Company, Oklahoma.
Control Program	-	The authorized program. Curriculum Foundation Series, 1946 - 47 Edition, for Grades I, II, and III, published by Scott Foresman and Company, distributed in Canada by W. J. Gage Limited, Scarborough, Ontario.

In an effort to find a more efficient method of teaching reading at the primary level, the Phonetic Keys to Reading approach was introduced into seven Grade One classes in the Fort Garry School System in September, 1962, with the permission of the Department of Education and the Fort Garry School Board. The fourteen classes involved in the experiment were arranged so that comparison could be made on a school basis and also on an individual basis.

Prior to 1961, in an attempt to develop independence in reading at an earlier age level, that part of the authorized program concerned with phonics was stressed in Grade One. In Grades Two and Three, this part was further emphasized and phonic workbooks were introduced. As this program was generally satisfactory it was not considered advisable to interfere with it as a control class.

The comparison which follows, therefore, is not a pure comparison of Phonetic Keys to Reading and the word recognition approach per se but rather an examination of the Phonetic Keys to Reading and the Curriculum Foundation Series with the phonic modification as it was practised in Fort Garry.

It is also of importance to consider that, while the teachers were asked to adhere as closely as possible to the program in use in their classrooms, they were also asked to remember that any program is merely a means through which the ability to read can be developed and, as children differ in their manner of learning, some adjustment in the program to suit individual or group needs might be necessary. Such adjustments would be within the confines of the program. However, should deviation beyond the confines of either program appear to be in the best interests of the individuals or groups, such deviation would be permitted and would take the form considered by the teacher, the principal and the supervisor to be of the most benefit to those concerned. In actual practise, little deviation occurred.

It is recognized that the two foregoing limitations may offend those who would set a pure comparison of two methods much in the news but since the object of the Fort Garry School Division was to look for any possible advantage that P. K. might offer over the approach locally employed, it is felt that no apology is necessary.

The texts used in the experimental groups were as follows:

Phonetic Keys to Reading series
published by the Economy Publishing Company, Oklahoma City, Oklahoma.

Grade I	Tag Dot and Jim All Around
Grade II	Through Happy Hours As Days Go By
Grade III	Along New Ways Wide Doors Open

Equipment as recommended by the publishers was supplied to all rooms. Curriculum Foundation Texts, as recommended in the Teacher's Manuals, were used. The Guide Books for this series were used as the teacher felt the suggestions contained therein would supply the needs of their classes. No workbooks from this series were used in Grade I. Several Grade II classes used them. Texts from other series were used as necessary -- the particular books chosen being dependent upon the requirements of the class concerned and, to some extent, books available.

The texts used in the control groups were as follows:

Curriculum Foundation Series, 1946-47 Edition
published by Scott-Foresman and Company and distributed in Canada by W. J. Gage Limited, Scarborough, Ontario.

Grade I	Reading Readiness We Look and See We Work and Play We Come and Go Fun With Dick and Jane Our New Friends
Grade II	Friends and Neighbours More Friends and Neighbours
Grade III	Streets and Roads More Streets and Roads

The workbooks, an integral part of the program, were used.

Equipment as recommended by the publishers, was supplied to all classrooms.

The emphasis upon the skills part of the program, which had become a part of the method, was allowed to continue, as was the use of phonics workbooks.

The phonics workbooks in use were:

1962-63	Phonics We Use
	published by Lyons and Carnahan
1963-64	Reading Through Phonics
1964-65	published by J. M. Dent and Sons (Canada) Limited

Supplementary reading as required by the individual classes was done, texts used being governed by the requirements of the class concerned and the material available.

Teachers of both groups were asked not to lose sight of what reading really is -- a means of receiving ideas from a printed page -- and to help the pupils realize that the acquisition of skill is merely a means to this end.

As can be seen from the foregoing paragraphs, the emphasis has not been on either program but on helping the child to acquire the ability to read.

The tests used to obtain the mental maturity and intelligence level of the pupils are as follows:

Grade I	1962-63	Pintner - Cunningham Primary Test - Form A of the Pintner General Ability Tests: Verbal Series
Grade II	1962-63	The Lorge Thorndike Intelligence Tests Level 2 - Form A - Primary Battery 2 AP (1957 Ed.)
	1963-64	Otis Quick Scoring Mental Ability, Alpha
Grade III	Our program tests for intelligence in Grades Two, Four and Six, Therefore, the intelligence quotient in Grade III are the results of tests given in Grade Two.	

The Achievement Tests used were:

Grade I -	Dominion Achievement Tests in Silent Reading Primary, Grade I, Type III, Paragraph Reading.
Grade II -	The Dominion Achievement Test in Silent Reading Type II, Diagnostic Test in Paragraph Reading, Form A Grade 2.
Grade III -	The Dominion Achievement Test in Silent Reading Type II - Diagnostic Test in Paragraph Reading - Form A Grades 3 and 4.

TABLE XIX

COMPARISON ON AN INDIVIDUAL BASIS

Tabulation of Results
Grade I, 1962-63

EXPERIMENTAL GROUP (Phonetic Keys)						CONTROL GROUP (Curriculum Foundation)					
Pupil	Sex	M. A. Time 1.4	C. A. Time 1.9	Birth Date	Grade Time 1.9	Grade Time 1.9	Birth Date	C. A. Time 1.9	M. A. Time 1.4	Sex	Pupil
1PKJ63	F	9-0	6-11	15/6/56	3.6	3.3	12/7/56	6-11	9-0	F	1CFJ63
2PKJ63	M	8-8	6-9	27/8/56	3.3	2.0	25/8/56	6-9	8-8	M	2CFJ63
3PKJ63	F	8-8	6-9	7/9/56	1.9	2.0	8/9/56	6-9	8-8	F	3CFJ63
4PKJ63	M	8-5	6-11	22/6/56	1.8	2.0	7/7/56	6-11	8-5	M	4CFJ63
5PKJ63	F	8-5	6-8	5/10/56	2.1	3.0	18/10/56	6-7	8-5	F	5CFJ63
6PKJ63	M	8-5	7-2	2/4/56	2.1	2.3	7/4/56	7-2	8-5	M	6CFJ63
7PKJ63	F	8-3	7-2	6/4/56	3.6	3.6	10/4/56	7-2	8-3	F	7CFJ63
8PKJ63	F	8-3	7-4	7/2/56	3.0	3.3	26/1/56	7-4	8-3	F	8CFJ63
9PKJ63	M	8-0	6-8	29/9/56	2.6	2.5	19/10/56	6-7	8-0	M	9CFJ63
10PKJ63	M	8-0	6-10	30/7/56	2.8	2.5	30/7/56	6-10	8-0	M	10CFJ63
11PKJ63	F	8-0	7-2	3/4/56	2.2	2.2	1/4/56	7-2	8-0	F	11CFJ63
12PKJ63	F	8-0	6-6	25/11/56	3.0	2.2	18/12/56	6-5	8-0	F	12CFJ63
13PKJ63	M	7-10	6-8	8/11/56	2.0	2.2	6/11/56	6-8	7-10	M	13CFJ63
14PKJ63	F	7-10	6-11	16/6/56	3.3	3.3	22/5/56	7-0	7-10	F	14CFJ63
15PKJ63	F	7-10	7-4	12/2/56	3.0	2.8	6/2/56	7-4	7-10	F	15CFJ63
16PKJ63	M	7-10	7-3	22/2/56	3.0	1.6	18/3/56	7-2	7-10	M	16CFJ63
17PKJ63	F	7-10	6-5	28/12/56	2.5	3.3	25/1/56	6-4	7-10	F	17CFJ63
18PKJ63	F	7-10	6-10	2/8/56	3.6	3.0	16/7/56	6-10	7-10	F	18CFJ63
19PKJ63	M	7-8	6-9	22/8/56	1.8	3.0	22/8/56	6-9	7-8	M	19CFJ63
20PKJ63	M	7-8	6-11	28/6/56	3.3	1.6	1/7/56	6-11	7-8	M	20CFJ63
21PKJ63	F	7-8	6-6	21/11/56	2.8	3.3	28/10/56	6-7	7-8	F	21CFJ63
22PKJ63	M	7-8	6-5	31/12/56	3.6	2.0	26/1/56	6-4	7-8	M	22CFJ63
23PKJ63	F	7-6	6-9	17/8/56	2.6	2.3	17/8/56	6-9	7-6	F	23CFJ63
24PKJ63	M	7-6	7-0	7/6/56	1.9	2.8	14/6/56	7-0	7-6	M	24CFJ63
25PKJ63	M	7-4	7-1	23/4/56	2.8	2.1	23/4/56	7-1	7-4	M	25CFJ63
26PKJ63	F	7-4	6-9	30/8/56	2.6	2.1	3/8/56	6-10	7-4	F	26CFJ63
27PKJ63	M	7-2	6-6	20/11/56	2.3	2.6	12/11/56	6-7	7-2	M	27CFJ63
28PKJ63	F	7-2	6-7	18/10/56	3.6	2.6	20/10/56	6-7	7-2	F	28CFJ63
29PKJ63	M	7-2	6-11	16/6/56	3.0	2.5	14/6/56	6-11	7-2	M	29CFJ63
30PKJ63	F	7-2	7-4	5/2/56	1.8	2.2	9/2/56	7-4	7-2	F	30CFJ63
31PKJ63	F	7-0	6-8	8/10/56	2.4	2.4	7/10/56	6-8	7-0	F	31CFJ63
32PKJ63	M	7-0	7-0	12/6/56	3.3	2.5	17/6/56	6-11	7-0	M	32CFJ63
33PKJ63	M	7-0	7-5	12/1/56	2.3	3.6	8/1/56	7-5	7-0	M	33CFJ63
34PKJ63	M	6-11	6-6	22/11/56	2.0	1.8	22/11/56	6-6	6-7	M	34CFJ63
35PKJ63	M	6-11	6-11	4/7/56	2.1	2.0	4/7/45	6-11	7-0	M	35CFJ63
36PKJ63	M	6-10	6-10	24/7/56	2.4	2.0	14/8/56	6-10	6-11	M	36CFJ63
37PKJ63	F	6-3	6-7	1/11/56	2.8	1.7	13/11/56	6-7	6-3	F	37CFJ63
38PKJ63	M	6-3	6-8	8/10/56	2.1	1.7	11/10/56	6-8	6-3	M	38CFJ63
39PKJ63	M	6-3	6-10	10/8/56	2.0	2.3	18/8/56	6-9	6-3	M	39CFJ63
40PKJ63	F	6-3	6-6	3/12/56	2.0	1.6	21/11/56	6-6	6-3	F	40CFJ63

TABLE XIXA

Grade I Comparison on an Individual Basis

Grade Frequencies

Experimental Group		Control Group	
Achievement			Achievement
Grade Level	f	f	Grade Level
3.6	5	2	3.6
3.3	4	5	3.3
3.0	5	3	3.0
2.8	4	2	2.8
2.6	3	2	2.6
2.5	1	4	2.5
2.4	2	1	2.4
2.3	2	3	2.3
2.2	1	4	2.2
2.1	4	2	2.1
2.0	4	6	2.0
1.9	2	0	1.9
1.8	3	1	1.8
1.7	0	2	1.7
1.6	0	3	1.6
	40	40	

Grade I **TABLE XIXB** **1962-63**

Comparison of Achievement on an Individual Basis

Grade Medians and Range

EXPERIMENTAL GROUP			CONTROL GROUP		
M. A. (Time 1.4)	C. A. (Time 1.9)	Achievement (Time 1.9)	Achievement (Time 1.9)	C. A. (Time 1.9)	M. A. (Time 1.4)
Median 7-8	Median 6-10	Median 2-6	2-3 Median	6-10 Median	7-8 Median
Range 6-3 to 9-0	Range 6-5 to 7-5	Range 1-8 to 3-6	1-6 to 3-6 Range	6-4 to 7-5 Range	6-3 to 9-0 Range

Grade I **TABLE XIXC** **1962-63**

Comparison of Achievement on an Individual Basis

Summary of Grade Frequencies

EXPERIMENTAL GROUP						CONTROL GROUP					
(Time 1.4		(Time 1.9)		Achievement (Time 1.9)		Achievement (Time 1.9)		C. A. (Time 1.9)		M. A. (Time 1.4)	
Age	Per Cent	Age	Per Cent	Grade	Per Cent	Per Cent	Grade	Per Cent	Age	Per Cent	Age
9-0	1 or 2.5	7-0 to 7-11	11 or 27.5	3.0-3.6	14 or 35.0	25 or 10	3.0-3.6	27.5 or 11	7-0 to 7-5	2.5 or 1	9-0
8-0 to 8-11	11 or 27.5									27.5 or 11	8-0 to 8-11
7-0 to 7-11	21 or 52.5	6-0 to 6-11	72.5	2.0-2.8	21 or 52.5	60 or 24	2.0-2.8	72.5 or 29	6-0 to 6-11	55.0 or 22	7-0 to 7-11
6-3 to 6-11	7 or 17.5			1.9	2 or 5.0	0.0 0	1.9			15.0 6	6-3 to 6-11
	40 100.0		100.0	1.8 and below	3 or 7.5	15 or 6	1.8 and below				
					40 100.0	100 40				100.0 40	

* TABLE XX

Grade I Comparison on an Individual Basis 1962-63

EXPERIMENTAL GROUP									CONTROL GROUP									
Phonetic Keys									Curriculum Foundation									
					(Munroe Tests)					(Munroe Tests)								
Pupil	Sex	M.A.	C.A.	Birth Date	P.P.	P	F.	Dom.	Dom.	F	P.	P.P.	Birth Date	C.A.	M.A.	Sex	Pupil
3PKJ63	F	8-8	6-9	7/9/56	47	50	62	1.9	2.0	59	52	48	8/9/56	6-9	8-8	F	3CEJ63
4PKJ63	M	8-5	6-11	22/6/56	42	45	37	1.8	2.0	62	50	44	7/7/56	6-11	8-5	M	4CEJ63
9PKJ63	M	8-0	6-8	29/9/56	49	51	63	2.6	2.5	61	51	46	19/10/56	6-7	8-0	M	9CEJ63
10PKJ63	M	8-0	6-10	30/7/56	46	52	62	2.8	2.5	61	50	48	30/7/56	6-10	8-0	M	10CEJ63
11PKJ63	F	8-0	7-2	3/4/56	46	50	61	2.2	2.2	63	52	48	1/4/56	7-2	8-0	F	11CEJ63
15PKJ63	F	7-10	7-4	12/2/56	49	50	59	3.0	2.8	63	49	48	6/2/56	7-4	7-10	F	15CEJ63
19PKJ63	M	7-8	6-9	22/8/56	43	44	55	1.8	3.0	62	50	48	22/8/56	6-9	7-8	M	19CEJ63
28PKJ63	F	7-2	6-7	18/10/56	46	51	63	3.6	2.6	59	50	48	20/10/56	6-7	7-2	F	28CEJ63
29PKJ63	M	7-2	6-11	16/6/56	46	51	62	3.0	2.5	54	47	48	14/6/56	6-11	7-2	M	29CEJ63
30PKJ63	F	7-2	7-4	5/2/56	34	39	49	1.8	2.2	60	51	40	9/2/56	7-4	7-2	F	30CEJ63
31PKJ63	F	7-0	6-8	8/10/56	49	48	61	2.4	2.4	53	50	49	7/10/56	6-8	7-0	F	31CEJ63
32PKJ63	M	7-0	7-0	12/6/56	49	52	63	3.3	2.5	58	46	47	17/6/56	6-11	7-0	M	32CEJ63
38PKJ63	M	6-3	6-8	8/10/56	47	50	50	2.1	1.7	49	52	44	11/10/56	6-8	6-3	M	38CEJ63
Aggregate		98-6	89-7		593	633	747	32.3	30.9	764	650	606		89-5	98-4		
Average		7-7	6-11		45.6	48.7	57.5	2.5	2.4	58.8	50	46.6		6-11	7-7		

* Included for interest only.

TABLE XX continued --

M. A. This is according to the Pintner-Cunningham Primary Test, Form A, administered at Time 1.4 of the school year.

Munroe Tests:

These are the:
Basic Reading Tests for Primary Grades
designed by Marion Monroe to be used with the basic readers of the Curriculum Foundation Series.

P. P. This test was given when the three pre-primers were completed.

P. This test was given upon completion of the primer.

F. This test was given when the First Reader was completed.

The results are in terms of items correctly answered on the test.

Dom. This refers to:

The Dominion Achievement Test in Silent Reading,
Primary, Grade One, Type III, Paragraph Reading.

The results are given in terms of reading grade level.

Of 333 pupils embarking upon this experiment in September, 1962, it was possible to find thirteen pupils from the Experimental Classes who matched in sex, chronological age (there being not more than 28 days difference,) and mental age, thirteen from the control group and to all of whom had been given the Monroe tests at the Preprimer, Primer and Grade One level and the Dominion Achievement Test in Silent Reading.

TABLE XXI

Grade II Comparison on an Individual Basis, 1963-64

Tabulation of Results

EXPERIMENTAL									CONTROL										
Gain 63-64	Identification	Sex	I.Q.	M.A. at 1.4 in 62-63	Birth Date	C. A. (June '64)	Achievement 1963	Achievement 1964	Achievement 1964	Achievement 1963	C. A. (June '64)	Birth Date	M.A. at 1.4 in 62-63	I.Q.	Sex	Identification	Gain 63-64
.7	1PKJ63	F		9-0	15/6/56	8-0	3.6	4.3	4.4	3.3	7-11	12/7/56	9-0	115	F	1CFJ63	1.1
.2	2PKJ63	M		8-8	27/8/56	7-9	3.3	3.5	3.3	2.0	7-9	25/8/56	8-8	130	M	2CFJ63	1.3
.7	4PKJ63	M		8-5	22/6/56	7-11	1.8	2.5	3.9	2.0	7-11	7/7/56	8-5	122	M	4CFJ63	1.9
2.5	6PKJ63	M	116	8-5	2/4/56	8-2	2.1	4.6	4.0	2.3	8-2	7/4/56	8-5	119	M	6CFJ63	1.7
.4	7PKJ63	F	105	8-3	6/4/56	8-2	3.6	4.0	4.3	3.6	8-2	10/4/56	8-3	122	F	7CFJ63	.7
1.3	8PKJ63	F	120	8-3	7/2/56	8-4	3.0	4.3	4.4	3.3	8-4	26/1/56	8-3	122	F	8CFJ63	1.1
1.1	9PKJ63	M	108	8-0	29/9/56	7-8	2.6	3.7	4.1	2.5	7-7	19/10/56	8-0	133	M	9CFJ63	1.6
1.7	11PKJ63	F	117	8-0	3/4/56	8-2	2.2	3.9	4.1	2.2	8-2	1/4/56	8-0	112	F	11CFJ63	1.9
.8	13PKJ63	M	113	7-10	8/11/56	7-7	2.0	2.8	3.9	2.2	7-7	6/11/56	7-10	122	M	13CFJ63	1.7
1.1	14PKJ63	F	109	7-10	16/6/56	7-11	3.3	4.4	4.3	3.3	8-0	22/5/56	7-10	114	F	14CFJ63	1.0
1.6	15PKJ63	F	127	7-10	12/2/56	8-4	3.0	4.6	4.3	2.8	8-4	6/2/56	7-10	109	F	15CFJ63	1.5
1.1	16PKJ63	M	108	7-10	22/2/56	8-3	3.0	4.1	2.8	1.6	8-2	18/3/56	7-10	109	F	16CFJ63	1.2
.9	21PKJ63	F	116	7-8	2.11/56	7-6	2.8	3.7	3.7	3.3	7-7	28/10/56	7-8	122	F	21CFJ63	.4
.4	22PKJ63	M	110	7-8	31/12/56	7-5	3.6	4.0	4.4	2.0	7-4	26/1/56	7-8	119	M	22CFJ63	2.4
1.3	23PKJ63	F	105	7-6	17/8/56	7-9	2.6	3.9	4.1	2.3	7-9	17/8/56	7-6	98	F	23CFJ63	1.8
.2	24PKJ63	M	113	7-6	7/6/56	8-0	1.9	2.1	4.0	2.8	8-0	14/6/56	7-6	127	M	24CFJ63	1.2
1.1	25PKJ63	M	105	7-4	23/4/56	8-1	2.8	3.9	4.3	2.1	8-1	23/4/56	7-4	118	M	25CFJ63	2.2
1.7	26PKJ63	F	108	7-4	30/8/56	7-9	2.6	4.3	4.0	2.1	7-10	3/8/56	7-4	115	F	26CFJ63	1.9
1.7	27PKJ63	M	117	7-2	20/11/56	7-6	2.3	4.0	3.5	2.6	7-7	12/11/56	7-2	123	M	27CFJ63	.9
1.0	29PKJ63	M	122	7-2	16/6/56	8-0	3.0	4.0	3.7	2.5	8-0	14/6/56	7-2	106	M	29CFJ63	1.2
1.4	30PKJ63	F	103	7-2	5/2/56	8-4	1.8	3.1	3.3	2.2	8-4	9/2/56	7-2	111	F	30CFJ63	1.1
.6	32PKJ63	M	127	7-2	12/6/56	3-0	3.3	3.9	3.1	2.5	7-11	17/6/56	7-2	114	M	32CFJ63	.7
.7	34PKJ63	M	117	6-11	22/11/56	7-6	2.0	2.7	2.3	1.8	7-6	22/11/56	6-11	104	M	34CFJ63	.5
.3	35PKJ63	M	114	6-11	4/7/56	7-11	2.1	2.4	2.9	2.0	7-11	4/7/56	6-11	116	M	35CFJ63	.9
1.2*	38PKJ63	M	113	6-3	8/10/56	7-8	2.1	3.3	2.5	1.7	7-8	11/10/56	6-3	100	M	38CFJ63	* .8
1.7	39PKJ63	M	89	6-3	10/8/56	7-10	2.0	3.7	2.9	2.3	7-9	18/8/56	6-3	104	M	39CFJ63	.6
.7	40PKJ63	F	124	6-3	3/12/56	7-6	2.0	2.7	2.0	1.6	7-6	21/11/56	6-3	112	F	40CFJ63	.4

Identification - The same combination of letters and numbers as were given to the individual in Grade I.
I. Q. - as derived from the Otis Quick Scoring Mental Ability, Alpha, October, 196[illegible].
M.A. - as at Time 1.4 in 1962-63. Included here because it was one of the three factors used in matching the individuals of experimental - control classes.
C. A. - as at Time 2.9 in 1963-64. This should not be used in conjunction with M.A. shown to compute I. Q.
Achievement - given in grade levels as shown by The Dominion Achievement Tests in Silent Reading.

* Students 38PKJ63 and 38CFJ63 must be omitted from any further consideration as student 38CFJ63 transferred from a control group into an experimental group.

TABLE XXIA

1963-64

Grade II Comparison of Achievement on an Individual Basis

Grade Frequencies

EXPERIMENTAL GROUP			CONTROL GROUP		
Achievement Grade Level	f	cf	cf	f	Achievement Grade Level
4.6	2	26	26	0	4.6
4.4	1	24	26	3	4.4
4.3	3	23	23	4	4.3
4.1	1	20	19	3	4.1
4.0	4	19	16	3	4.0
3.9	4	15	13	2	3.9
3.7	3	11	11	2	3.7
3.5	1	8	9	1	3.5
3.3	0	7	8	2	3.3
3.1	1	7	6	1	3.1
3.0	0	6	5	0	3.0
2.9	0	6	5	2	2.9
2.8	1	6	3	1	2.8
2.7	2	5	2	1	2.7
2.5	1	3	2	0	2.5
2.4	1	2	2	0	2.4
2.3	0	1	2	1	2.3
2.1	1	1	1	0	2.1
2.0	0	0	1	0	2.0
Below 2.0	0	0	1	1	Below 2.0
	26			26	

TABLE XXIB

1963-64

Grade II Comparison of Achievement on an Individual Basis

Grade Median and Range

EXPERIMENTAL GROUP		CONTROL GROUP	
Median	3.9	3.9	Median
Range	2.1 to 4.6	Below 2.0 to 4.4	Range

TABLE XXIC

Grade II Comparison of Achievement on an Individual Basis 1963-64

Summary of Grade Frequencies

EXPERIMENTAL GROUP		CONTROL GROUP	
Grade Level	Per Cent	Per Cent	Grade Level
4.0 to 4.6	11 or 42.3%	50.0% or 13	4.0 to 4.6
3.0 to 3.9	9 or 34.6%	30.8% or 8	3.0 to 3.9
2.9	0 or 0.0%	7.7% or 2	2.9
2.0 to 2.8	6 or 23.1%	7.7% or 2	2.0 to 2.8
Below 2.0	0	3.8% or 1	Below 2.0
	26 100.0%	100.0% 26	

It is to be noted that the achievement grouping is measured within each grade rather than around the median. This provides a more ready comparison with the traditional achievement expectancy.

TABLE XXID

Grade II Comparison on an Individual Basis 1963-64

Further Summary of Grade Frequencies

EXPERIMENTAL GROUP		CONTROL GROUP	
Grade Level	Per Cent	Per Cent	Grade Level
3.0 - 4.6	76.9%	80.8%	3.0 - 4.6
2.9	0.0%	7.7%	2.9
Below 2.9	23.1%	11.5%	Below 2.9
	100.0%	100.0%	

TABLE XXII

Grade III Comparison on an Individual Basis 1964-65

Tabulation of Results

EXPERIMENTAL | CONTROL

								Achievement			Achievement										
Gain 1964-65	Gain 1963-64	Identi-fication	Sex	I. Q.	M.A. at 1.4 62-63	Birth Date	C. A. (June 1965)	1963	1964	1965	1965	1964	1963	C. A. (June 1965)	Birth Date	M.A. at 1.4 62-63	I. Q.	Sex	Identi-fication	Gain 1963-64	Gain 1964-65
2.1	.2	2PKJ63	M		8-8	27/ 8/56	8-9	3.3	3.5	5.6	5.9	3.3	2.0	8-9	25/ 8/56	8-8	130	M	2CFJ63	1.3	2.6
1.3	.7	4PKJ63	M		8-5	22/ 6/56	8-11	1.8	2.5	3.8	6.1	3.9	2.0	8-11	7/ 7/56	8-5	122	M	4CFJ63	1.9	2.2
1.7	2.5	6PKJ63	M	116	8-5	2/ 4/56	9-2	2.1	4.6	6.3	5.9	4.0	2.3	9-2	7/ 4/56	8-5	119	M	6CFJ63	1.7	1.9
.7	.4	7PKJ63	F	105	8-3	6/ 4/56	9-2	3.6	4.0	4.7	4.7	4.3	3.6	9-2	10/ 4/56	8-3	122	F	7CFJ63	.7	.4
1.8	1.3	8PKJ63	F	120	8-3	7/ 2/56	9-4	3.0	4.3	6.	6.3	4.4	3.3	9-4	26/ 1/56	8-3	122	F	8CFJ63	1.1	1.9
2.2	1.1	9PKJ63	M	108	8-0	29/ 9/56	8-8	2.6	3.7	5.9	5.3	4.1	2.5	8-7	19/10/56	8-0	133	M	9CFJ63	1.6	1.2
2.8	.8	13PKJ63	M	113	7-10	8/11/56	8-7	2.0	2.8	5.6	5.9	3.9	2.2	8-7	6/11/56	7-10	122	M	13CFJ63	1.7	2.0
1.9	1.1	14PKJ63	F	109	7-10	16/ 6/56	8-11	3.3	4.4	6.3	5.0	4.3	3.3	9-0	22/ 5/56	7-10	114	F	14CFJ63	1.0	.7
2.2	.9	21PKJ63	F	116	7-8	21/11/56	8-6	2.8	3.7	5.9	6.1	3.7	3.3	8-7	28/10/56	7-8	122	F	21CFJ63	.4	2.4
2.6	.4	22PKJ63	M	110	7-8	31/12/56	8-5	3.6	4.0	5.6	6.3	4.4	2.0	8-4	26/ 1/56	7-8	119	M	22CFJ63	2.4	1.9
1.7	1.3	23PKJ63	F	105	7-6	17/ 8/56	8-9	2.6	3.9	5.6	6.1	4.1	2.3	8-9	17/ 8/56	7-6	98	F	23CFJ63	1.8	2.0
1.4	1.1	25PKJ63	M	105	7-4	23/ 4/56	9-1	2.8	3.9	5.3	5.3	4.3	2.1	9-1	23/ 4/56	7-4	118	M	25CFJ63	2.2	1.0
1.3	1.7	26PKJ63	F	108	7-4	30/ 8/56	8-9	2.6	4.3	5.6	5.6	4.0	2.1	8-10	3/ 8/56	7-4	115	F	26CFJ63	1.9	1.6
1.9	1.7	27PKJ63	M	117	7-2	20/11/56	8-6	2.3	4.0	5.9	5.0	3.5	2.6	8-7	12/11/56	7-2	123	M	27CFJ63	.9	1.5
1.6	1.4	30PKJ63	F	103	7-2	5/ 2/56	9-4	1.8	3.1	4.7	3.8	3.3	2.2	9-4	9/ 2/56	7-2	111	F	30CFJ63	1.1	.5
1.4	.3	35PKJ63	M	114	6-11	4/ 7/56	8-11	2.1	2.4	3.8	5.0	2.9	2.0	8-11	4/ 7/56	6-11	116	M	35CFJ63	.9	2.1
1.3	1.7	39PKJ63	M	89	6-3	10/ 8/56	8-10	2.0	3.7	5.0	5.6	2.9	2.3	8-9	18/ 8/56	6-3	104	M	39CFJ63	.6	2.7
1.7	.7	40PKJ63	F	124	6-3	3/12/56	8-6	2.0	2.7	4.4	3.1	2.0	1.6	8-6	21/11/56	6-3	112	F	40CFJ63	.4	1.1

Identification - The same combination of letters and numbers as were given to the individuals in Grade I.
I.Q. - As derived from the Otes Quick Scoring Mental Ability Tests, Alpha, October 1963
M.A. - As at Time 1.4 in 1962-63. Included here because it was one of the three factors used in matching the individuals of the experimental and control classes.
C.A. - As at Time 3.9 in 1964-65. This should not be used with M. A. shown to compute I. Q.
Achievement - Given in grade levels as shown by the Dominion Achievement Tests in Silent Reading.

TABLE XXIIA

Grade III Comparison of Achievement on an Individual Basis 1964-65

Grade Frequencies

EXPERIMENTAL GROUP			CONTROL GROUP		
Achievement				Achievement	
Grade Level	f	cf	cf	f	Grade Level
6.3	2	18	18	2	6.3
6.1	1	16	16	3	6.1
5.9	3	15	13	3	5.9
5.6	5	12	10	2	5.6
5.3	1	7	8	2	5.3
5.0	1	6	6	3	5.0
4.7	2	5	3	1	4.7
4.4	1	3	2	0	4.4
4.2	0	2	2	0	4.2
4.0	0	2	2	0	4.0
3.8	2	2	2	1	3.8
3.6	0	0	1	0	3.6
3.4	0	0	1	0	3.4
3.3	0	0	1	0	3.3
3.1	0	0	1	1	3.1
	18			18	

TABLE XXIIB

Grade III Comparison of Achievement on an Individual Basis 1964-65

Grade Median and Range

EXPERIMENTAL GROUP		CONTROL GROUP	
Median	5.6	5.6	Median
Range	3.8 - 6.3	3.1 - 6.3	Range

TABLE XXIIC

Grade III Comparison of Achievement on an Individual Basis 1964-65

Summary of Grade Frequencies

EXPERIMENTAL GROUP		CONTROL GROUP	
Grade Level	Per Cent	Per Cent	Grade Level
6.1 - 6.3	3 or 16.7%	27.8% or 5	6.1 - 6.3
5.0 - 5.9	10 or 55.5%	55.5% or 10	5.0 - 5.9
4.0 - 4.7	3 or 16.7%	5.6% or 1	4.0 - 4.7
3.1 - 3.8	2 or 11.1%	11.1% or 2	3.1 - 3.8
	18 100.0%	100.0% 18	

It is to be noted that the achievement grouping is measured within each grade rather than around the median. This provides a more ready comparison with the traditional achievement expectancy.

TABLE XXIID

Grade III Comparison of Achievement on an Individual Basis 1964-65

Further Summary of Grade Frequencies

EXPERIMENTAL GROUP		CONTROL GROUP	
Grade Level	Per Cent	Per Cent	Grade Level
4.2 - 6.3	16 or 88.9%	88.9% or 16	4.2 - 6.3
4.0	0 or 00.0%	00.0% or 0	4.0
3.1 - 3.8	2 or 11.1%	11.1% or 2	3.1 - 3.8
	18 100.0%	100.0% 18	

APPENDIX I

PRIMARY LANGUAGE ARTS OUTLINE

1966

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PROVINCE OF MANITOBA

DEPARTMENT OF EDUCATION

PRIMARY LANGUAGE ARTS OUTLINE

GRADES I - III

Provisional

Authorized by
THE MINISTER OF EDUCATION

PROVINCE OF MANITOBA
1966

This program is to be introduced for use in Grade One classes of all elementary schools in Manitoba commencing in September 1966. The provisional outline will be extended and revised before final authorization is given for its use in additional primary grades.

SECTION I: A LANGUARY ARTS PROGRAM

The need for improved communication skills has never been greater. Today's teacher must be aware of the sequence in which children develop the communication skills, show how these skills can be used to influence the environment, and teach how to use them for worthy ends. It is through the languarge arts program that children learn to express their personalities and ideas. The achievement of each child rests largely on his ability to communicate effectively what he comprehends.

The development of the interwoven areas of the language arts - listening appreciatively and critically, expressing ideas effectively through the spoken and written word, and reading with perception and clarity - is a growing responsibility of all teachers of children. These areas are so closely interrelated that they should not be considered as individual subjects in the school curriculum (lanugage, reading, spelling, and handwritting) but as parts of an integrated program designed to serve one common purpose, the effective exchange of ideas.

The principles involved in interpreting patterns of thought and in communicating ideas should be taught continuously from kindergarten on, with the differences in application through the various levels being those of degree rather than of kind. Teachers should consider the development of the language program to be cumulative with a stress upon expression and appreciation rather than structural analysis. Large blocks of time which provide flexibility are necessary for integrated language arts teaching.

In all language expression, teachers should remember that the product takes second place to what happens to the child as he develops in ability to organize and express his thoughts. The effectiveness of the language experiences offered by the school will be measured by the child's growth in ability to communicate with others. Communication means both assimilation and expression and is achieved through listening, speaking, reading, and writing.

LISTENING

The habit of listening in a questioning and purposeful manner can contribute greatly to a child's academic career, but teachers must realize that listening is a specific ability which needs to be taught. Listening as a language arts skill is much more than passive hearing. In effective listening, the listener must become involved in what he hears and make an individual response. He must be able to receive the speaker's ideas and feelings and apply them to his own ideas and experience. In appreciative listening, the listener responds to the mood of the speaker and enjoys the content of the material.

In critical listening, the listener weighs what is heard and relates it to previous learning experience.

Children's listening vocabularies are more extensive than their speaking vocabularies so they should be given opportunities to listen to selections far above their speaking and reading levels.

A good listening program will teach pupils to:

1. listen courteously, sit quietly, and look at the speaker;
2. listen carefully to evaluate stories and reports;
3. listen appreciatively to stories and poems;
4. listen attentively in order to be able to make comments and ask questions about material presented, and to interpret discussions and conversation;
5. develop their powers of auditory discrimination.

SPEAKING

By language is meant the sources and systems of spoken and written expression. Words serve as a vehicle of thought and a means of communication. People are swayed by words; people are moved to action by the flow of words that sound convincing to the ears.

In the life of every individual, for the child as well as the man, the ability to communicate verbally is a pre-requisite for status in the group. The ability to express ideas clearly and succinctly, to listen courteously but critically, to evaluate introspectively yet objectively, is important. In fact, it is to people who develop such skills, and who are able to work with others, that we look for leadership.

The child upon entering school should be challenged with innumerable opportunities for improving the listening and speaking skills already attained. The teacher must be sensitive to the evidences of readiness for new experiences in language expression. The best possible example should be set by use of a pleasant voice; correct pronunciation, enunciation, and articulation; and by clear and succinct communication of ideas.

Objectives of Oral Expression

1. To provide guided experiences which will give the child something to talk about, and opportunities to clarify the thinking and concepts which motivate him to explore and find solutions to problems.
2. To teach the child to verbalize about these experiences in such a way that he grows in skills of organization, selectivity, and vocabulary enrichment.
3. To facilitate use of verbal expression as a medium of communication through conversation, choral speaking, creative dramatics, story telling, discussion and other speech activities.
4. To teach the child to speak so that his speech is audible, acceptable and agreeable.
5. To encourage the child to evaluate his own speech competencies.

A good speech program should:

1. provide numerous experiences, real and vicarious;
2. provide a variety of speech situations which motivate oral communication;
3. emphasize the importance of effective speaking;
4. provide daily opportunities to practice specific skills;
5. encourage self-evaluation.

READING

Learning to read is a complex process for which no one method or device is sufficient. Word recognition, word meaning, some method of word attack, retention and reaction to new ideas, critical and creative responses, are interwoven simultaneously in a good reading program from its very beginning.

What a child reads has a profound effect upon his interests, attitudes and ideals.

Objectives of the Reading Program

1. To develop the desire to read for enjoyment and because of interest.
2. To develop the skill of word recognition.
3. To develop the ability to interpret the meaning intended by the writer.
4. To develop the ability to use the reading skills for a great variety of purposes.
5. To integrate reading with the other language arts.

Scope - A balanced developmental reading program provides for:

1. basal reading instruction to build the foundation;
2. use of supplementary materials to reinforce skills learned;
3. reading in content fields to make use of skills learned and to extend knowledge;
4. recreational reading for enjoyment and information.

It is necessary to make provision for all types of reading lessons and to obtain a proper balance among them. Overemphasis on one or more to the neglect of others makes it impossible to realize the five objectives of the reading program as listed above. However, it should be noted that the same selection may be read for a variety of purposes and complete separation of types of reading is neither desirable nor possible.

A good program makes provision for the average learner, the slow learner, and the fast learner, and for remedial instruction when necessary.

The primary teacher must be especially aware that every subject offers opportunities for the teaching of reading.

A good reading program:

1. takes into account the fact that children reach various developmental stages at different chronological ages;
2. recognizes the fact that the development of reading abilities may proceed at different rates;
3. takes into account the fact that reading ability is affected by environment and personal characteristics;
4. organizes materials and instruction in a sequential design;
5. stimulates enthusiasm for reading.

WRITTEN EXPRESSION

Most children talk before they are two, but few children write before they come to school. They feel no need to write. When they enter school, however, they need to identify their personal belongings and their papers, to keep a record of daily plans, to write about their experiences, and to write messages to take home. The initial emphasis in teaching communication in written expression is on selecting from the child's own experiences the things which are important for him to preserve.

Since both oral and written expression grow out of experience, the teacher has a responsibility for:

(a) creating an environment in which there is both a need and opportunity for writing;

(b) providing first-hand and vicarious experiences in and out of the classroom to stimulate writing;

(c) developing a background for writing through literature as experience;

(d) helping children establish purposes for writing;

(e) providing time for writing;

(f) directing children in the development of writing skills;

(g) helping children establish criteria for evaluating their writing;

(h) organizing the writing program on a developmental basis.

Objectives of Written Expression

1. To stimulate children to write to express ideas, feelings, and imaginings.
2. To exchange ideas, discuss experiences, think creatively prior to writing.
3. To develop skills needed in effective written expression: vocabulary enrichment, organization of ideas, selection of topics, to the end that the individuality of the child should emerge through knowledge of form, content and style presented in good literary models.
4. To encourage self-evaluation skills and techniques for moving to a higher level of expression as the child is ready.
5. To extend the child's background of experience through acquaintance with literature, language and culture of the various ethnic groups.
6. To encourage the replacement of colloquial and hackneyed expressions, as well as gross errors of speech, by correct and acceptable English.

A good writing program:

1. provides a wealth of experiences, first-hand and vicarious, to serve as a stimulation for writing;
2. is based on a plan for writing which begins with experience, moves to exchange of ideas, provides needed help in vocabulary and writing skills, and culminates in expression of ideas, feelings and/or creative thought;
3. provides direct teaching needed in the development of skills essential to each type of writing - creative and expository;
4. teaches the skills of organization, form, and evaluation;
5. emphasizes the characteristics of spontaneity, fluency, imagination, originality, and sparkling expression in creative writing;
6. emphasizes the characteristics of organization, form, accuracy, logic, and correct mechanics of expression in expository writing;
7. promote appreciation of good literature as a reservoir for ideas to stimulate and improve children's writing.

WRITTEN EXPRESSION

An effective approach to written expression in the kindergarten and primary grades is based on a balanced developmental program which provides guidance and direct teaching in both creative and factual written expression.

Creative Writing

In creative writing emphasis is on the expression of the idea, feelings, and imagination of the writer. It is that kind of writing in which the child in one way or another, expresses his feelings, his ideas, or his reactions to an experience, real or imaginary. Creative writing is concerned with artistic self-expression, whereas expository writing is concerned with functional communication. Creative writing appeals to the senses and emotions; expository writing to common sense and logic.

The Teacher's Role in Guiding Creative Writing

Provide the Motivation

To guide creative writing successfully, the teacher should be familiar with spurs to creative writing. Prairies, weather, seasons, stars, night, birds, fish, streams, wheat fields, lakes, fire - any of these may stir a response in children. Any of the exciting experiences from real life, literature, or the imagination can serve to ignite the spark that results in creative writing.

Provide for Exchange of Ideas

Not all children are self-starters -- some need to have a push. They need opportunities to get their ideas from others. They need time for the exchange of ideas, to talk, to think through experiences before they are ready to write.

Children may have ideas, but they need words to express them. Through vocabulary development children will be stimulated to find the exact word or phrase that fits the expression. To help children increase the pool of words from which they draw in writing, the teacher may:

Help Children Express Ideas

1. keep a list of colorful phrases and descriptive words in a file box;
2. play word games in which children pantomime the meanings and shades of meanings of words;
3. keep lists of shining words, and trite words;
4. list on a chart various categories of words such as colorful, gay, tranquil, sad, angry;
5. describe a common every-day occurrence in interesting exciting, and vivid ways.

Encourage New Ideas

When a child expresses an idea in a unique way he should be commended for it and the expression added to a big book of "Unique Ideas".

Guide the Writing

The teacher should circulate among the children to give them help and encouragement when they need it.

Provide for Sharing the Writing

Sharing or publishing creative work stimulates some children to write both more frequently and with greater discrimination. Publishing the work of children in a mimeographed or printed form is an incentive to further writing.

The teacher does not mark up the child's creative writing with red pencil. This does not preclude, however, a discussion with the child which leads him to make suggestions for improvement. Among the questions such a discussion may bring forth are:

Evaluate the Creative Writing

1. Did you enjoy writing it?
2. Does it say what you wanted it to say?
3. Is the content original?
4. Are you giving an old idea a new twist?
5. Has the writing imagery, comparison, rhythm?
6. What sensory appeals did you use?
7. Are there enough colorful and descriptive words?
8. Are there so many descriptions that the meaning is obscured?
9. Could you improve this if you wrote a second draft?

If the child is satisfied with the first draft in creative writing, he should be permitted to choose a new subject for his next creative writing experience.

A SAMPLE LESSON

Provide the Motivation

Let's pretend that the whole class is suddenly transported to an Eskimo village at Frobisher Bay. You have seen pictures of the great expanses of snow, the dog teams, the tractor trains and Eskimos hunting. Remember the film we saw on Inuvik, and the display of Eskimo carvings we saw at the Art Centre.

Provide for Exchange of Ideas

Now close your eyes, and when you have a picture you can see clearly in your mind's eye, will you exchange ideas? Who has a starter for a story about an Eskimo hunter? I'll write your ideas on the blackboard.

John: An Eskimo boy was fishing through a hole in the ice when a polar bear came ambling into sight.

Susan: An Eskimo was caught in a blizzard, and he tried to build himself an igloo shelter.

Tom: A huge whale was washed up on the ice.

(As soon as the children finish sharing ideas, they make a choice and start writing).

Help Children Express Ideas and Encourage New Ideas

Some children have difficulty in expressing their ideas even when they get the basic thought for the story. When this happens, the teacher might continue in the following manner:

"How would you describe the tundra and the people who live there?"

Tom: Flat . . . windy - big stretches of nothing.

Mary: Snow whirling in every direction with nothing to stop it.

Susan: The Eskimos have faces like leather because the wind and frost burn them.

Isabel: The howling of the dogs is drowned by the howling of the wind.

(During the writing the teacher circulates among the students, giving a helpful word here, an encouraging smile there, helping the child observe, feel, imagine. She draws out *his* ideas, then helps him express them.)

Guide the Writing

"What a delightful sense of humor you have."

"You have a genius for invention."

"You are an artist with words."

"I like the way you are developing the story."

"Tell me what you want to say and maybe we can get it down on paper together."

(The teacher continues to circulate among the children, encouraging, praising, suggesting.)

In the early grades creative writing takes the form of group stories, poems, or short plays, first dictated to the teacher, and then as the child gains skill in handwriting, the creative work is in the child's own writing.

Provide for Sharing

When the children finish their writing they drop it into the Treasure Chest in the Writer's Corner. Once a week it is opened and the stories are shared. At the end of a term the children compile their own anthology of creative writing, each child choosing what he considers to be his best work. It is mimeographed. The children might even have an "Author's Tea" when another grade, or the parents, are invited and the authors autograph their work.

EXPOSITORY WRITING

Expository writing, unlike creative writing is *factual*, functional, and utilitarian. It is writing which is done to be read by someone other than the writer. It is writing for the purpose of communicating information, ideas, or facts. When the child has something to say which he wishes to be preserved he is ready to write. He knows that, when he talks, what he says is quickly forgotten; when he writes, his ideas are recorded.

Children need an environment in which writing is valued. They need a classroom organized on the premise that children need time to grow, to experience, and to develop. They also need time to write. They cannot write in an environment in which they are hurried, harassed, or pressured. Tension and good writing are antagonistic.

A developmental approach to writing will facilitate the realization of the objectives of writing with accuracy, truth, logic, organization, and correct mechanics.

Objectives of Expository Writing

1. To provide experiences which will stimulate children to express ideas, record facts, and compose reports.
2. To establish a purpose for each writing assignment.
3. To provide opportunity to write on a variety of topics and to use a variety of forms of literary expression.
4. To provide direct teaching of form, organization, mechanics, and correct usage in a functional setting.
5. To set standards of evaluation that motivate each child to become increasingly competent in improving his writing.
6. To form the habits of the writer: proofreading, re-writing, and analysis of one's own writing.

Developmental Steps in Teaching Factual Writing

Children do not enter the primary school as full-blown writers. They develop ability first to express their ideas orally. Developing skill in expository writing progresses through several steps, each of which requires motivation, guidance, and evaluation from the teacher:

1. Composing and dictating experience charts or stories to the teacher who acts as a scribe.
2. Dictating and copying messages.
3. Learning skills needed in writing through directed practice.
4. Developing independence in writing to communicate facts, ideas, and happenings.

Composing and Dictating Experience Charts of Stories

Children are eager to talk about exciting group experiences and many times wish to keep a record of the happenings. Wise teachers use this built-in motivation and plan such activities as excursions both on and off the school grounds to stimulate such a writing experience. Acting as a scribe, the teacher elicits from the children a group composition which includes the main points of interest, the exciting adventure, and the culminating point of the experience.

Children learn to organize ideas, develop interest, and record their impressions. The teacher encourages them by accepting their statements, and by approving their expression of ideas, instead of putting her words into their mouths. She asks thought-provoking questions, as well as questions which elicit recall; thus through this medium she stimulates thinking, encourages recall, and motivates ways of expressing the children's own thoughts.

Dictating and Copying

As soon as the children have the necessary handwriting skills for copying from the script on the chalkboard or newsprint, the teacher can begin helping them in written expression by eliciting from them expressions such as "Happy Birthday", "No School Thursday", "Home and School Wednesday, "To Mother".

The teacher continues to be the scribe who helps them organize their ideas into a brief message which she writes on the chalkboard for them to copy. Thus, in a functional, meaningful setting children learn to organize ideas, and to express them clearly, logically, and fluently.

Directed Practice

When the children participate in writing messages they begin to see the need to learn the mechanics of composition (punctuation, capitalization, and spelling). As this need becomes evident the teacher calls attention to such items as placement and capitalization of the title, capitalization at beginning of sentences and proper names, punctuation, margins, and spelling of difficult words.

Mechanics are important in factual writing for this type of writing is written for someone else to read. Some children pick up the needed skills earlier than others because of their developmental readiness, interest and special concerns. Practice must be geared to the needs of the children as well as the abilities of individual children to benefit from direct teaching and directed practice.

Independence in Writing

Children vary too, in the time required to become independent in writing. Some teachers respond to the child's desire to move ahead in writing independently by using such motivations as the following:

The Unfinished Story	- developed co-operatively by the group and written by the teacher, leaving the end of the story for each child to write.
An Unfinished Letter	- composed by the class, written on the chalkboard by the teacher. The last part is left unfinished for the individual response of each child.
Writing Captions	- children write titles and sentences, descriptions of pictures they create.
Writing a Picture Story	- (A series of pictures which tells a story.) The teacher asks the children to fold a large sheet of paper into six or eight sections which become the frame for each picture the children create. They write captions and the narrative at the bottom of each picture telling the story briefly. The beginning, the sequence of events, the climax and the ending are emphasized in developing such a picture sequence.

Activities for Expository Writing

Many meaningful activities for purposeful, factual writing, as well as for developing skill in written usage based on correct oral usage, must be provided if the children are to be motivated to sharpen the tools for writing. The following activities challenge children to communicate effectively through written expression, and at the same time encourage development of the mechanics of writing and the level of language usage.

Group Activities

Composing experience charts and cumulative stories.
Writing captions for movies and illustrated stories.
Writing letters, invitations, and than-you notes.
Keeping a record of daily plans, weather, etc.
Formulating problems for a unit of work in social studies.
Planning and listing questions to be answered during an excursion.
Listing names of characters and scenes in dramatizations.
Listing room duties, committee assignments, book reading.
Outlining plans for a program, games to be played, rules for the game.
Composing poems, riddles, news articles and summaries.

Individual Activities

Signing name, writing captions, and labels.
Writing tags for gifts.
Observing and recording daily temperatures.
Writing daily news items.
Keeping records of lunch money, attendance, library reading.
Writing numbers for a monthly calendar, Arithmetic games.
Pages in a book they are writing.
Framing questions for interviewing people:
    the nurse, custodian, policeman, fireman, fire chief,
    librarian, postman, the inspector, student teacher.
Keeping a personal spelling list.
Making a picture dictionary.
Composing songs and plays based on social studies or reading materials.

Group and Individual Practice in the Mechanics of Writing

Using correct manuscript form, correct margins, heading papers according to plan.

Capitalizing the names of people, the school, first word of a sentence, "I", names of months, days, holidays, titles of stories, poems, pictures, etc.

Capitalizing names of towns, countries, provinces, streets.

Capitalizing Dr., Mr., Mrs., Miss.

Using Correct Punctuation

Teachers should help children become skillful in using -

a period at the end of sentence, initial, or abbreviation;
a question mark in interrogative questions;
an apostrophe in single contractions, in possessive case;
a quotation marks at the beginning and ending of the direct words
    of others in the stories they write;
an exclamation point at the end of a sentence that has strong feeling.

Correct Usage

The school must take responsibility for helping a child understand levels of usage. In planning instruction in correct usage, the teacher should determine which errors are common among the group and deal with them first. In Grades I and II, only those errors that are actually occurring in the group should be dealt with.

In the primary grades children will learn to use correctly such forms as: saw, seen; did, done; went, gone; come, came; ran, run;, eat, ate; wasn't, weren't; has, have; hasn't, haven't; through an oral approach - not through filling in blanks in sentences which have little relation to the language they use in speaking.

Providing the child with a model of good English, reading literature of high quality, taking an oral approach to usage, and helping children use language appropriate to the situation will go far in improving a child's sense of fitness in written expression.

In creative writing, content, originality, spontaneity, vivid language, fluency of ideas, and imagination are emphasized. In factual writing, the basic conventions of written expression are taught and practiced in terms of a functional setting, a purposeful activity, and individual readiness.

SPELLING

Most pupils wish to express their thoughts in written form long before they can spell all the words they wish to use. It must be recognized that, for the primary child, his listening, speaking and reading vocabularies will always exceed the number of those words he can learn to spell. This means that each child must be given individual help in spelling the words he wishes to use. Individual lists, self-made or special dictionaries, and access to alphabetically arranged word-file boxes can be used for this purpose. However, systematic teaching of spelling, beginning with writing only the initial consonants and later the whole word is essential if pupils are to develop their own spelling power.

Learning spelling in the initial stages demands much closer scrutiny of words than is desirable for reading.

In order to deal with the phonetic parts of words the pupil who, in reading was saying what he saw, must now write what he hears. This is a new skill and care and attention must be given to acquiring this skill before the child is expected to spell. Short, useful, non-phonetic words such as who, you should be introduced early. A multi-sensory approach is necessary to produce accuracy. (Listen, see, pronounce clearly, spell aloud, write.)

At the point at which the spelling text is introduced, a systematic daily program, following the design of skill development of the basal series, should become an integral part of the language arts curriculum. Thus the students will be working with an individual list, a class list from the content fields, and the basal spelling list.

Words learned in isolation and then not used are quickly forgotten, whereas these same words when used in written work become firmly established.

As well, periodic review of words previously learned is necessary for retention. Spelling is a skill and should be taught as a skill subject. (Present, pre-test, drill on difficulties, practice, test again, etc.). Overlearning is essential if the permanent accuracy expected in spelling is to result.

Time required to master a spelling lesson varies with children. When a child has demonstrated the ability to spell words in a given lesson he should be allowed to use the remainder of his spelling time for written expression.

Objectives in the Teaching of Spelling in the Primary Grades

1. To be able to respond automatically with the sequence of letters or syllables.
2. To develop the power to spell most of the words required for written expression in the early stages.
3. To develop confidence in thinking through the spelling of required words.
4. To develop an alertness about the spelling of new words and a desire to know how to spell correctly those words required for written expression.
5. To develop skill in writing derived-forms of words already learned.
6. To develop skill in proof-reading.

An effective spelling program:

1. develops a method of word-study.
2. makes use of multi-sensory approach.
3. teaches clear pronunciation of words.
4. provides for frequent review.
5. promotes use in written expression of all words taught.
6. develops skill in use of dictionary.
   e.g. learning alphabet
   some alphabetizing
   recognition of synonyms and homonyms
   using special primary dictionaries

HANDWRITING

For the year 1966-67, teachers are asked to continue to use the handwriting outline as found in the present program of studies. A new outline will be included when the completely revised program is issued in September 1967.

LITERATURE

The primary program has been planned to foster development of appreciation through the presentation of good literature. While appreciation cannot be taught, it can be encouraged by the sharing of feelings and reactions between the teacher and pupils.

Through the hearing of, or the reading of, poems and stories, and discussion, children may acquire:

1. the ability to enjoy rhythm.
2. the ability to delight in word sounds.
3. the ability to delight in word pictures.
4. the ability to identify with a character.
5. the ability to enjoy humor, fantasy and whimsy.
6. the ability to appreciate and understand the world they live in.

A good literature program provides:

1. children with rich and lasting experience in literature;
2. a permanent interest in reading a wide variety of good literary material;
3. the power to use such material for pleasure and personal enrichment;
4. opportunities for the development of taste for good literature.

Scope: Children's literature should include a wide variety of examples from prose, poetry and drama chosen for their literary quality.

Rhythm	- nursery rhymes and easy jingles at the level of interest and understanding.
Fantasy	- folktales, fables, myths, legends, poems, animal stories, and modern fanciful tales.
Realism	- nature stories, stories of home and school, stories of children of other lands, adventure and travel experiences.
Humor	- rhymes, poetry, make-believe tales.

Recreational Reading

As early as possible, even at the pre-primer level, children should begin to read voluntarily materials of their own choice. Picture books which include one or two lines within the reading vocabulary may be enjoyed at this level.

Time during the school day should be provided for children to browse through books suitable to their interest level.

A library should be an integral part of every elementary school. It should be a familiar place to which children go for pleasure and enrichment.

Literary Quality

The children of today are heirs to a rich store of good literature. By selecting from the best, by reading daily books and poems of quality, and by telling stories, the teacher provides the key with which the child will unlock the door to his own magic world of books.

Some qualities of a good children's story are:

1. an interesting theme which is appealing to children;
2. a plot that moves rapidly along with the characters;
3. characters with definite personalities - who are convincing and credible; (Even an animal character can be convincing when it is developed with consistency of action and conversation.)
4. style which is appropriate to the theme and content; (The appropriateness of words and skillful balance of phrase and clauses creates style that appeals to the senses.)

Some qualities of good children's poetry are:

1. Melody - the sounds of the words should contain pleasing alliteration and rhyme, and be compatible with the theme.
2. Rhythm - the movement should be appropriate to the theme.
3. Theme - The subject should appeal to the intellect and emotions. Primary children like narrative and descriptive poems.
4. Imagery - The choice of words should create vivid pictures and musical effects.

Poetry

In the early primary literature program, time should be devoted to Mother Goose rhymes. The children respond to the verses with every evidence of enjoyment and almost immediate participation because the rhymes, the characters, the story element, the humor and the brevity, are appealing to the very young. The child who lacks these in his background is deprived of part of his literary heritage.

Introduction of a Poem

1. Create interest by relating selection to child's own experiences, (snowstorm, a new pair of shoes, a new baby, fire, etc.)
2. Prepare the children emotionally by a preliminary discussion to establish the right mood.

Reading the Poem

Read the poem while the children listen. The reading should not be interrupted by detailed explanations of difficult words or ideas.

The teacher should read well with sincerity, enthusiasm, and meaningful interpretation. Records of many children's favourites read by artists of oral interpretation are available. These sometimes afford opportunity for a closer sharing of the poem.

Reread the Poem

Children should be given the opportunity to hear the poem again. The enjoyment is greatly increased by having the children recreate the scene, the mood, and the word pictures.

Related Activities

These activities should be of the type that increase enjoyment and develop powers of appreciation:

1. Preparation of illustrations and models;
2. Dramatizations, pantomimes, puppet plays;
3. Choral reading to the accompaniment of appropriate actions.

Sound Effects

1. Rhythm

   Rhythm or movement gives life and/or meaning to a poem. It varies with the thought or mood. To assist the children in becoming aware of rhythms, the teacher may use different kinds of body movements which may be related to music or physical education.

   E.g. tapping - "Hickory, Dickory Dock"
   clapping - "Pop Goes the Weasel", "Someone"
   bouncing balls - " Jack Be Nimble"
   marching - "The Grand Old Duke of York"
   walking - "Feet"
   running - "Wee Willie Winkie"
   dancing - "Over In the Meadow"
   skipping - "Hippity Hop"
   swinging - "The Swing"
   prancing - "Bell Horses"
   knocking - "The Postman"

2. Rhyme

   Awareness of rhyme is one of the listening skills. Have the children supply rhyming words, find unusual rhymes, and also create rhymes of their own.

3. Vocabulary Enrichment

   Poems should be explored for richness of the poet's choice of words. Where the children display curiosity about words, such words should be the subject of class discussion and interpretation (teacher-guided but not dominated).

4. Word Pictures

   (a) Imagery - Encourage children to select vivid pictures and express their own reactions.

(b) Mood - A good poem creates its own mood. A poet selects words to create the mood and the reader must do justice to the poet's expression. Children should be led to recognize the devices of the poet as they help to create mood.

5. Theme

Where the theme is fairly obvious, encourage the children to express it in their own words.

Choral Speaking

Choral speaking may be a follow-up for some of the most enjoyable poetry selections. It is a great aid to the interpretation of beauty and the promotion of the social values of a shared enterprise.

Children readily memorize poetry they like and express.

Children should be encouraged to discuss and decide how the selection should be interpreted, e.g. what sort of voice should be used; the avoidance of a "sing-song" rhythm.

LESSON PLAN

Prose

Introduction

1. Interest can be created by associating the story with the child's own experiences, with stories in the reading program, or with certain special events.
2. When necessary, explain the setting and new concepts, using any helpful aids such as maps, pictures, objects, etc., to enrich the meaning and extend appreciation.
3. Relate pertinent information about the author or circumstances of writing when it furthers the appreciation and enjoyment, e.g. Robert Louis Stevenson is one of the children's writers whose personal life affected his writing themes.

Read the Selection

The teacher should read clearly with dramatic effect to heighten the enjoyment. Make good use of pause, so that the children can enjoy the suspense.

Discussion

Questions and comments should be encouraged. The impressions and sensory images that the children have gained should be expressed.

Parts of the story may be reread to increase the enjoyment or to provide an opportunity for a follow-up activity. Rereading helps to understand a particular characterization or the style.

Related Activities

1. Children may re-tell an episode of the story, each telling his selection in proper sequence.

2. Story events may be recalled in sequence in various ways: dramatizations, box movies, puppet shows.
3. Children may create pictures or murals to show their appreciation and interpretation of the story.
4. Creative thinking may be developed by creating a different ending.

Basic Elements in Literature

The combination of theme, plot, characterization, and style, produces a unique piece of literature and creates a total effect upon the individual reader. Through vicarious experiences, a child lives the lives of many characters in many places and yet remains highly individual in his reactions. Since literature is of the heart as well as of the mind, a child must feel something of his own identification with the strengths and weaknesses, delights and sorrows, of the characters whose experiences have, for a brief time, become his own.

Theme - the main idea of a story.
By simple questions, the children can be encouraged to see, that the theme in The Biggest Bear by Ward, for example, is that the love of a boy for an animal can lead him to perform unexpected deeds.

Plot - the action of the story built around the theme.
The plot can be made meaningful to the children if they learn to think in terms of a character facing a problem. For the young children, a story is usually more enjoyable if the main problem is clearly defined and is resolved in a satisfactory way by the end of the story.

Style - the way the author writes his story.
An awareness of style can be fostered in early grades. By rich experiences with good literature, children can be made aware of the author's style, e.g. A.A. Milne's works indicate a delight in the sound of words and are very appealing to youngsters.

Young children can learn to appreciate the style through an awareness of the author's appeal to the senses. They quickly notice this skill because their own senses are so delightfully keen. Primary children can see the winter picture, hear the sounds of the melting snow and smell the earth in White Snow, Bright Snow by Alvin Tressett:

> " . . . Houses crouched together, their windows peaking out from under great wide eyebrows . . . The sound of dripping, running water, and the smell of wet, brown earth filled the warm air . . . Fenceposts lost their dunce caps, the snowman's arms dropped off, and water gurgled in gutters and rain pipes."

Characterization

Long after the details of a story are forgotten, the characters remain in the memory of the listener or the reader. The characters must be convincing and credible. The action and conversation must be consistent with the characterization.

Children should be encouraged to discuss the characters in the story and to see that individuals have weaknesses and strengths. Children need to learn to accept themselves with all mankind - not always weak, not always strong, but worthy of the understanding, acceptance, and love of others who, like themselves, are struggling with their own particular natures.

A good literature program:

1. is presented by a teacher who is familiar with a wide range of children's literature and the techniques being taught.
2. is well prepared. To make the presentation truly enjoyable, teachers must study a story or poem before sharing it with children.
3. is carefully chosen. A teacher should not teach a selection he does not like or cannot appreciate, even though it is a recognized classic.
4. is informal and flexible. The good teacher will watch for, or create, situations in which the children may enjoy literature selections. Weather, seasons, expeditions, local and national events, activities, and discussions may give rise to an atmosphere in which the love of literature may grow.

A BALANCED READING PROGRAM

There was a time when in the primary grades children were expected to learn to read; in the intermediate grades they were expected to read to learn; in junior high they were expected to read to evaluate; and finally in senior high they were expected to read creatively. Today, however, in order to equip children for life in a complex technological society we must teach them from the beginning the skills needed to read for meaning. Reading for meaning requires a child to master a cluster of distinctive skills, with experience in each of the skills at every level of reading, broadening and expanding his power to get meaning and interpret meaning in the books he reads.

"Reading is something we do, not so much with our eyes as such, as with our knowledge, our interests and enthusiasms, our hatreds and fondnesses and fears, our evaluations in all their forms and aspects." [1]

Comprehension Skills (Reading to Get and Interpret Meanings)

Developing skills of comprehension requires the mastery of a cluster of distinctive skills, with experience in each of those skills at every level of reading growth.

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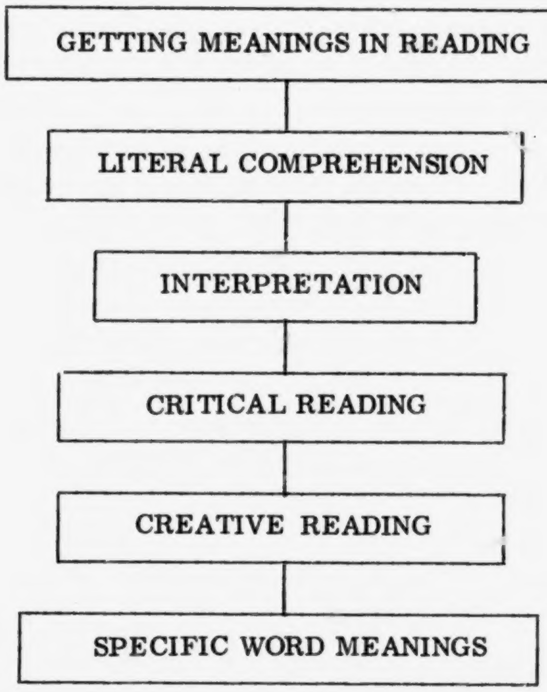
[1] Wendell Johnson - Your Most Enchanted Listener
New York: Harper and Brothers, 1956 pp. 123

"We need to recognize the different categories of meaning-getting processes in reading. To do this we must break down the blanket term of comprehension . . . There are different kinds of comprehension which in turn call for the use of different mental processes."[2] In the diagram below are graphically portrayed the specific meaning-getting processes which must be developed throughout the levels of reading growth if children are to read for meaning.



[3]

Reading involves the use of materials that are challenging and thought-provoking, so that each child will learn to use books to enrich his experiences, extend his horizons, broaden his understandings, develop his insights, and unlock the door to reading. Growth in reading is a complex continuous process. Reading for meaning is the door to that process. An understanding of the elements involved in reading for meaning is the key that unlocks the door.

COMPREHENSION SKILLS

1. Literal comprehension involves the skill of getting the literal meaning of a word, idea or sentence in context. It is the level of comprehension which requires mere recall. There is no depth in this kind of reading, and yet all too frequently, practice in literal comprehension dominates the comprehension skills because teachers are content to use the following techniques of meaning-getting:

   (1) asking questions based directly on the text to elicit mere recall;
   (2) true-false statements;
   (3) completion sentences;
   (4) multiple-choice responses.

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[2] Nila Banton Smith - Future Needs in the Teaching of Reading Basic Skills Patterns: Kindergarten Through Twelve. Toronto: Copp Clark Co., 1966 p. 25

[3] Adapted from Ibid - p. 26.

Among the types of questions which should be used in teaching literal comprehension are those which involve:

(1) getting the main idea
(2) recalling or recognizing details
(3) determining the sequence of events
(4) identifying things mentioned most frequently
(5) checking to understand the appropriate meaning

2. Interpretation goes beyond literal comprehension to supply meanings not directly stated in the text. It compels the reader to infer meanings which are not apparent in the words presented. The thinking skills involved are:

   (1) drawing inferences
   (2) making generalizations
   (3) reasoning cause and effect
   (4) anticipating outcomes
   (5) making comparisons
   (6) sensing motives
   (7) discovering new relationships

   Interpretation gives the child an opportunity to transcend the boundaries of a situation, and at the same time recognize the limitations imposed by the author.

3. Critical reading requires the reader to go beyond interpretation of what the author says and to give his personal reaction. It involves the reader in evaluating and making personal judgments as to the quality, accuracy and plausibility of what is read. It requires that the reader make intelligent observation. Greater awareness in children can be encouraged through questions which elicit comparison with the child's own experiences, ask the author's purpose, or ask the child to react critically to the style of the author.

4. Creative reading goes beyond critical reading. It involves more than the ability to judge what one reads, both in terms of content and manner of presentation. Creative reading calls into play a child's imagination, his flow of ideas, his ability to project himself beyond the limitations of the situation. The child enters into the author's experience and makes it his own.

   "Creative reading is concerned with the production of new ideas, the development of new insights, fresh approaches, and original constructs." [1]

   "The child can interpret, in creative reading, the situations in the light of his experience, and understand analogies, allusions, figures of speech, connotations and denotations; he can reorganize the ideas he receives into a pattern that is unique and personal. He can express his reorganized learning through various media - word and song, gestures and action, materials and composition, through the very make-up of his personality." [2]

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[1] David Russell, Children's Thinking, Boston: Ginn and Company, 1956, p. 283.

Specific Word Meanings

The skills of developing specific word meanings permeate all levels. For many years we have concerned ourselves with helping students to obtain word meanings from sentences and paragraphs. Only recently have we considered specific word meanings to be a reading problem. We have come to realize that lack of a single word may interfere with a student's ability to get the meaning of all, or part of a selection. The following activities will be effective in helping a child to develop skills in specific word meanings.

Methods of Developing Word Meaning

1) Through Experience:

Firsthand experience ranks highest as a technique in developing word meanings. Experiences build up a fund of clear, definite images which children use to relate the known to the unknown. The school can provide many experiences: direct experiences, with classroom activities and field trips, and vicarious experiences, through the various visual aids and sharing periods. Sharing of out-of-school experiences can be of specific benefit to our purpose when unfamiliar words are lifted from the conversation, presented on the board, and defined. The symbol should be associated with the experience to assure the child's knowing what he needs to know to interpret the symbol.

2) Through Pictures:

Collection of pictures to illustrate meanings of nouns, verbs, adjectives. Use all levels of picture reading: naming the objects in a picture, telling what is happening, interpreting the artist's idea.

Insert a picture in a sentence to replace a word; follow with a sentence containing the corresponding word.

3) Through Literature:

Enrich vocabulary through stories read or told by teacher and pupils.

Have pupils retell a story told by the teacher using new words meaningfully.

Read poetry containing sensory images.

4) Through Creative Expression:

Motivating situations for creative expression may include:

(a) asking pupils to create similes for the sound of crushing leaves, splashing waves.
(b) making lists of favorite sounds, sights, odors, foods.

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[2] Helen Huus, "Critical and Creative Reading." Reading and Inquiry Newark, Delaware: International Reading Association, Volume 16, 1965.

(c) having pupils think of "the quietest thing you can imagine".
(d) setting up a "Touch and Feel" table where children handle various objects and volunteer words that tell how each object feels in their hands.
(e) asking such questions as "What does it look like?" or "How did you feel?" to start children searching for precise descriptive terms that make word pictures for others to listen to or to read.
(f) writing group experience stories, incorporating new words gained through the class experience.
(g) writing original stories, with each child building up his own dictionary or card file of necessary words.

5) Through Comparison and Contrast:

(a) Help pupils discover the comparative forms of adjectives and draw illustrations e.g. tall, taller, tallest.
(b) collect or match pictures illustrating synonyms, antonyms, homonyms.
(c) discuss the multiple meanings of a given word, e.g. ball, bar, run, iron, mine.

6) Through Supplementary Reading:

Create an atmosphere that will encourage free recreational reading among pupils by:

(a) being familiar with many books so that the right book may be made available at the right time.
(b) having an ample supply of books at various interest and ability levels on the library table.
(c) encouraging children to bring their favourite books to school to be shared with class.
(d) following children's interests in selecting books from the library and in choosing stories to be read.
(e) reading some prose and poetry each day.
(f) binding experience charts and original stories into book form and making them accessible.
(g) providing definite times for recreational reading.
(h) stimulating desire to read by providing for reporting, illustrating, or some other type of motivation.

7) Through Classification:

List words under appropriate headings:

Things We Need in Art
Things We Take Home Today
People, Animals, Plants

Provide games based on this principle for children's free time.

8) Through Dramatization:

Action words (verbs) presented on word cards. Phrases may be used for the same purpose.

9) Through the Use of Proper Terms:

As children learn to read, they should be taught to use appropriate names for the material they encounter:

title
sentence
paragraph
period
question mark
compound word
consonant
vowel
syllable
prefix
etc.

This principle should be applied to other subjects in the curriculum, as well as to daily life in and out of school.

10) Through Context Clues:

An unknown word may be defined in context. "First he nibbled on some lettuce." "Then he took a bite of parsley." "The little rabbit liked (vegetables)."

Meaning As An Aid to Word Recognition

The meaningful word is the one most easily recognized and longest remembered. That is why nouns present little difficulty to children, compared with articles and adverbs, for instance. By developing word meanings in a variety of ways we can increase their chances of being recognized on second meeting.

1) Through Context Clues:

Several types of specific activities may be employed to promot skill in the use of context clues. These may involve group work or be used as seatwork.

Completion sentences are useful in helping to develop the ability to anticipate words:

The rabbit has a short ____________.
Apples grow on ____________.

In a similar exercise the child selects from a group the correct word to complete the sentence. The entire sentence should be read before the selection is made:

Bill laughed at the ______________ snowman.
(cat, cold, funny)

To give practice in using a context clue to choose the appropriate word from two or three with similar configuration, sentences such as this may be used:

Tom __________ to the store.
(went, want)

Completion sentences in which there is more than one possible answer may be used, first as seen below, then with the first letter of the missing word supplied, showing that visual clues may be used to check meaning clues:

Mother called Joe to come and eat his _____________.

2) Through Relation to Objects and Pictures:

The device of labelling furniture, pictures and drawings, science and nature displays, number symbols, supplies, etc., brings meaning that aids recognition.

Those words with abstract meanings should receive special emphasis upon presentation and considerable repetition thereafter. Devices to give meaning can sometimes be worked out:

> The word card showing here may be placed on a ledge near the reading circle while there is placed at the opposite end of the room.

3) Through Comparison and Contrast:

Exercises fixing the meaning of antonyms, synonyms, and homonyms also help to fix recognition patterns. Countless practice exercises can be devised to further both understanding and recognition:

> The words can be matched with each other.
> They can be matched with pictures.
> They can be illustrated by pupils.
> They can be used in sentences.

4) Through Classifying:

Familiarity with the meaning of words helps children recognize them in doing such exercises as:

> finding and listing names of children, animals, toys, food, etc.
> classifying words under certain headings, such as things that come in pairs, things we ride, etc.
> separating words and classifying them under two headings, as wild animals or farm animals, things we see or things we do.

5) Through the Use of the Chalkboard:

The chalkboard is essential to the linking of word meaning with word recognition. "The symbol should be associated with the experience to assure the child's knowing what he needs to know to interpret the symbol."

When an unfamiliar word is used in a story or conversation, for instance, it should be written on the board in order that visual imagery may be attached to meaning.

Lists should often be made for reference over a short period of time, even if there is to be no direct effort at teaching the words. What to take on our trip, words we use in arithmetic, workers we know, are some possible classifications.

(An especially troublesome word may have an honored place on the board for a while.)

The reading circle should face the chalkboard so that words can be written on it for use in the introduction and culmination of the reading lesson.

WORD RECOGNITION SKILLS

The word recognition skills give a pupil the key he needs to unlock new words. For the pupil in the early stages of reading they are important because they will help him to develop independence in word attack. These skills include:

(1) configuration
(2) context
(3) structural analysis
(4) phonic analysis
(5) combinations of skills

In order to be able to pronounce a word which he sees the child must be able to transfer the word symbol into sound. Good readers accomplish this by attending to a variety of skills simultaneously.

Picture clues and sight words should be considered as temporary aids in the recognition of unfamiliar words. The child will gain in independence only as he begins to use other clues such as contextual, phonic, and structural clues simultaneously.

Configuration

Recognizing words by sight alone probably serves its largest function during the early stages of reading instruction and then later becomes almost exclusively the technique used by mature readers. Learning by sight does not contribute to word attack power except insofar as these words are used later to develop generalizations about letter-sound relationships. Many English words however, such as the, come, could, you, do not lend themselves to complete phonic analysis. These must be taught as sight words even at higher levels but with attention to beginning sounds as soon as some words with the same initial sound have been taught. Sight words are learned best when these words are used in sentences and when contextual clues are also considered.

Context Clues

Using context clues is not the same as guessing what the word might be. The child must consider carefully the meaning implied in the sentence he is reading and reason out what the unrecognized word might be.

Structural Analysis

Structural analysis concerns itself with the units that make up the structure of a word e.g. root, prefix, suffix. These are met in initial reading stages as soon as plurals, contractions and possessives, and other inflectional forms are needed. The compounding of two or more known words to create a new word often results in difficulty until children have been taught to look for this possibility. Making up their own compound words helps children be aware of this element of structure in language.

Phonic Analysis

If several words are equally likely then the child must use other clues such as phonic analysis to determine which word is correct. Usually the initial consonant or the first syllable alone will indicate what the response should be and the child wastes time and energy if he continues on through the complete word. Phonics, which relates to the sounds which must be associated with letters and letter combinations in words, is a very important reading skill. It is the most complicated facet of the entire symbolic process of reading. It requires that the child be able to discriminate between very similar sounds and be able to blend sounds together to form words. Thorough knowledge of phonetic elements and principles, providing the child has learned to apply these, contributes greatly to independence in reading, but a child is handicapped if he relies too heavily on phonic analysis when other modes of attack would be more economical.

Combination of Skills

Though configuration may be the method used in the early stages of reading, as vocabulary load increases, few children can continue to make the fine discriminations which become necessary if other means of word recognition are not available. As soon as words are grouped into sentences the child must be guided into using context clues in order to limit the number of possible correct responses. As he becomes proficient in associating sounds with letters, he should be trained to use oral context and beginning letter sounds to think of a word that makes sense with the other words in a sentence. This is preferable to "sounding through" each word because the combination of phonics and context assures that the child will be made conscious of the meaning of what he is reading from the early stages. In order to use phonic clues the child must be able to hear differences in letter sounds. This skill can be acquired by most pupils at an early age if teaching designed to develop auditory discrimination takes place. No attempt should be made to teach the use of phonic clues until the skill of auditory discrimination has been developed.

Structural analysis should be taught as soon as inflectional endings are needed.

It is most essential that several different methods of word attack be used and that these be taught as early as possible. Though picture clues and sight words serve a very useful pupose as temporary aids in recognizing unfamiliar words the child will gain in independence only as he begins to use other clues such as context, structural analysis and phonics simultaneously. There is a direct relationship between the mastery of reading skills and the automatic use of the various methods of word attack. Good readers use a balance of all methods.

A DEVELOPMENTAL READING PROGRAM

For a number of years many educators have accepted the fact that learning to read is a developmental process. In every classroom from the first year of school on, there are as many variations in linguistic ability as there are obvious physical differences. In fact, the better the teaching, the wider the range of achievement becomes.

A developmental program recognizes that although children move through the different levels of development at varying rates, every child passes through every level and misses none of them. For most children Level A of the reading program outlined below will be a brief orientation period before the exciting process of learning to read is begun. However, each year there is a group of children who are immature for whom Level A is a very important time.

It gives them needed preparation for reading by providing abundant practice in the language skills, and a range of real experiences intended to broaden background and vocabulary. It also provides the time which alone can allow these children to move through the stages they must complete before reading can be started successfully.

Since the development of the many skills and concepts which a child must master in learning to read is sequential and continuous it is important that:

1. the reading program be planned in levels of accomplishment rather than according to grade.
2. the child advance to the next level when he has mastered a sufficient number of the skills outlined to enable him to work at that level successfully.

Levels of Reading Growth

The relationship between graded basal reading series and the designated levels are as follows:

Reading Levels	Instructional Levels		
Level A -	Reading Readiness		
Level B -	Preprimer	Primer	First Reader (1^2)
Level C -	1^2	2^1	2^2
Level D -	2^2	3^1	3^2
Level E -	3^2	4^1	4^2
		(consolidation and enrichment)	

Most children will complete Levels A through D over a three-year period. Some children will require four years or longer to complete Level D, while some will complete Level E or part of it, at least, during a three-year period.

Before a school can use such a program successfully, principal and teachers should work out a plan of implementation best suited to the local school situation. The effect of this type of program is not felt until the second year of implementation.

Guideline to Grouping - A good grouping organization should:

1. use readiness tests, reading inventories, and teacher evaluation to determine the reading instruction lelve.
2. plan assignments in terms of levels of skills and abilities of the group.
3. provide balanced, well-structured questions and assignments.
4. provide for continuous evaluations so that groupings are kept flexible.
5. recognize that no child should remain overlong on one level of reading growth without an analysis of his problems and an attempt to secure appropriate remedial help.

Grouping for Instruction

Regardless of the type of school organization used, there will still be a wide span of individual differences within each classroom. Teachers who know children well will adapt their class organization in many ways in order to suit instruction to these individual needs.

Some ways of doing this are:

(1) small group instruction where children of approximately similar ability are taught.
(2) total class where the activity is listening to a story or taking part in choral speaking.
(3) small group instruction where the group requires similar instruction in a particular field.
(4) small group instruction where the group has a common interest to share.

Whatever form of group instruction is being used, it should be flexible so that children move from group to group according to their best interest.

Level A - Reading Readiness

(See the Readiness Outline prepared and distributed by the Department of Education.)

Level B - Beginning to Read

The second level ushers in an exciting period for children. It is during this stage that children will have their first experience in reading from books. As soon as a group is ready to progress from readiness activities to directed reading they are introduced to the pre-primer of the reading series. In addition, they will continue to read from experience charts and participate in related language activities as they are taught the fundamental reading skills of Level B. Successful reading experiences at this level will develop positive attitudes toward reading.

Level C - Growth in Reading

During this period children develop the skills that lead to rapid growth in reading. This is a critical period if children are to develop an increased desire to read, an interest in a variety of materials, and independence in word recognition, comprehension and interpretation. Independence in reading grows as children learn to read for a greater variety of purposes, adapt their techniques to different requirements, take steps in locating material, and develop skills in unlocking unfamiliar words.

Level D - Rapid Growth in Reading

The evidences of reading development at this level are unmistakable. The child now reads fluently and independently and shows interest in reading widely, and in selecting books which may be classified as beyond his reading ability.

He takes more responsibility for reading on his own. He reads longer units which demand maturing skills of word attack and comprehension, adjusting of reading rate to the purpose, predicting outcomes, ascertaining organization of ideas, grouping significant ideas and supporting data.

At this level the child experiences the satisfaction in reading that comes from a combination of meaning clues and phonic and structural analysis. For him, reading complex material becomes a challenge - an encounter with adventure.

Level E - Expansion of Reading Skills

When a child reaches Level E, the door to the wonderful and exciting world of books has been opened. Now the gateway is wide and the child requires not only a variety of materials, but also careful and systematic instruction in many advanced reading skills: He finds new meanings for words he already knows, he uses his study skills more purposefully so that for him reading becomes an "experience".

LEVEL A: READING READINESS

I. Habits and Skills

Growth in reading readiness includes the development of habits and skills which will insure success in first steps to reading. The child:

(1) begins to use some of the mechanics of reading - focussing attention, following left-to-right direction, top to bottom progression.
(2) begins to concentrate and to work on simple tasks.
(3) distinguishes shapes, sizes, colours, place relationship, position.
(4) follows oral directions.

Library Skills

An introduction to library skills takes place now. The child:

(1) becomes aware of the variety of books.
(2) learns the function of a library.
(3) "reads" pictures and picture books.
(4) becomes aware of public libraries.
(5) makes use of a simple book display.

It is important that a variety of materials be made available to encourage interest in reading:

storybooks, picture books, nursery rhymes, pictures, children's magazines, experience charts, picture dictionaries, and other reading readiness materials.

Audio-visual materials include:

real objects, picture games, radio and television programs, recordings, tapes, films and filmstrips, puppets, rhythm instruments.

For Related Activities see Readiness Outline.

II. Concept and Vocabulary Development - Including Word Recognition through Phonics and Structure.

At the readiness level the child:

(1) begins to understand that symbols can be translated into words.
(2) recognizes labels (on personal possessions, on articles in the room, on food packages, etc.)
(3) recognizes differences in size, position, shape or internal features of pictures, geometric forms, letters or words.
(4) develops accurate discrimination of visual details.
(5) learns that in reading, eyes move from left to right.
(6) recognizes that some words begin with the same sound.
(7) recognizes that some words begin with the same sound as a given word.
(8) recognizes rhyming.
(9) provides words which rhyme with given word (or picture of an article).
(10) learns to enunciate clearly.
(11) learns nursery rhymes and participates in choral speaking.
(12) takes part in creative dramatics.
(13) shares in providing ideas to be incorporated in experience charts and enjoys "re-reading" these.
(14) begins to pick up books and shows a desire to read.

III. Getting and Interpreting Meaning

A. Literal Comprehension

The Main Idea

The child:

(1) becomes aware of the importance of a main event through listening to stories.
(2) illustrates the meaning of specific parts of stories read or told by teacher.
(3) is guided to recall and tell own experiences relevant to the main idea of a story.
(4) recalls main idea when teacher uses literal comprehension techniques (fact questions, completion sentences based on story, true false, multiple choice).
(5) discusses material in a way that reveals understanding. (This takes time.)

Finding and Relating Details

The child:

(1) describes objects which he can see, touch, taste and/or smell.
(2) studies pictures and objects for details which he can identify.

- (3) relates details in illustrations of a story to the main ideas of the story.
- (4) differentiates main ideas from related ideas in filmstrip stories or stories read by the teacher.

Determining Sequence

The child:

- (1) arranges pictures following sequence of events in a story.
- (2) arranges objects in sequential order.
- (3) becomes familiar with sequence of events in time and place.
- (4) identifies things mentioned most frequently in a story.
- (5) recognizes repeated passages in stories such as "Cats here, cats there, Cats and kittens everywhere" in Millions of Cats - Wanda Gag.

B. Interpretation

The child:

- (a) learns to associate picture symbols with meaning and to discuss these. (e.g. weather symbols on charts).
- (b) tries to relate written symbols in captions to pictures in the classroom.
- (c) studies pictures and asks questions.
- (d) shows interest in "reading" titles of books on the library table.
- (e) shows a desire to identify words on the chalkboard or a chart.
- (f) is able to give a reason for behaviour of story-book character.
- (g) makes up imaginary conversations between story-book characters.
- (h) makes inferences about what may happen next in a story.
- (i) anticipates endings and offers his ideas spontaneously.
- (j) predicts what may happen next.

C. Critical Reading

The child:

- (1) uses his own experience to give a judgment on the reason in what he has heard or seen.
- (2) expresses personal reaction to a story or episode in a story.
- (3) uses evidence to select the "best ending" for an unfinished story.
- (4) makes judgments about behaviour of characters.

D. Creative Reading

The child:

(1) shows enjoyment in listening to stories and poetry.
(2) identifies with the adventures of story characters.
(3) creates sensory images while listening to stories and poems.
(4) participates in creative dramatics about stories or poems read by the teacher.
(5) retells parts of stories he particularly likes.
(6) creates songs, poems, and short stories of his own.
(7) illustrates stories he likes in art, song, dance, or verse.

LEVEL B - BEGINNING TO READ

I. Habits and Skills

As part of a successful introduction to reading, the child:

(1) masters the mechanics of reading - focussing attention, following left-to-right direction, return sweep, and top-to-bottom progression.
(2) recognizes capital and small letter forms and the alphabetical order.
(3) follows both oral and simple written directions.
(4) handles books with care - holds them properly and turns pages carefully.
(5) becomes aware of various types of reading, e.g. notices, traffic signs, advertisements.
(6) develops the ability to read silently with comprehension.
(7) develops the ability to read aloud in a way which interprets material prepared silently.
(8) develops ability to work independently at simple reading tasks.

Library Skills

Beginning to read makes necessary awareness of, and provision for, a library. The child needs to:

(1) be aware of the mechanical features of a book-cover, title, author, table of contents, numbered pages.
(2) be at home in the library; knows the location of favorite easy-to-read and picture books, the lending system of a library.
(3) use simple picture dictionaries as a source of information and vocabulary development.
(4) show interest in illustrations.
(5) be aware of, and use public libraries.

To stimulate children's oral expression, a variety of materials are necessary.

Supplementary Reading Materials

storybooks, nursery rhymes, poetry, picture books, alphabet books, picture dictionaries, children's magazines, experience charts, pre-primers, primers, first readers, books in content areas and practice materials.

Audio-Visual Materials

See reading guidebooks and curricula for Social Studies or Health for helpful suggestions.

II. Concept and Vocabulary Development - Including Word Recognition by Means of Phonics and Structure.

As the formal introduction to reading is made, the child:

(1) makes finer visual discriminations.
(2) begins to build up a store of sight words from pre-primer and experience charts and to group these according to initial consonants.
(3) learns to use configuration clues, but as soon as possible uses contextual clues as well so that there is no build-up of strain on powers of visual memory for those children who lack skill in this area.
(4) makes finer auditory discriminations particularly between letter sounds.
(5) learns to use contextual clues and to check responses by as much attention to phonics as is necessary to unlock the unknown word.
(6) recognizes all consonant sounds, some blends and digraphs in words now part of his sight vocabulary.
(7) distinguishes consonants, some blends and some digraphs in unfamiliar words.
(8) continues to identify rhyming words and learns to substitute initial and final consonants to make new words.
(9) distinguishes short vowels.
(10) writes initial consonants of dictated words.
(11) begins to learn to blend consonants and short vowels to read simple words containing only these elements.
(12) begins to think through and to write from dictation simple words containing two or three consonants and one short vowel.
(13) makes a beginning in learning the long vowel sounds.
(14) becomes aware of endings s, 's, d, ed, ing.
(15) recognizes known words in compound words.

Begins to use a COMBINATION of Word Attack Skills

(sight, context, phonics, structure)

III. Getting and Interpreting Meaning

In a classroom where a child participates in a well-organized program of listening, observing, discussing both before and during the reading lesson, the skills essential for reading with, and for meaning will be developed. In an atmosphere filled with experiences to stimulate the desire to read from books as well as charts, the child develops in the following areas of comprehension:

A. Literal Comprehension

Getting the main idea

(1) develops understanding of the concept of main idea through discussions focussed upon theme or plot of a story heard or read.
(2) relates the picture and the printed words accompanying it.
(3) becomes adept at suggesting titles for stories or poems composed by the group.
(4) becomes discriminating in selecting the best of a number of suggested titles for a story.
(5) expresses effectively the main idea of a selection heard or read; develops skill in selecting the best statement of the main thought of a specific selection.
(6) distinguishes among: main idea, related idea, interesting idea.

Finding and Relating Details

(1) becomes skillful in understanding details through frequent participation in developing cooperative experience charts which tell a story, describe a class activity, or record pertinent information about a coming event.
(2) finds details in supplementary reading material which answer questions raised in class discussion.
(3) learns to listen to a story for details which he later delineates orally, through creative art materials, or in workbooks.

Determining Sequence of Time, Thought, Place

(1) shows understanding of sequence in replies to such questions as "How did the story begin?" "What happened next?" "How did the story end?"
(2) helps to arrange cooperatively composed sentences in sequence so that they tell a story in a logical, well-organized manner.
(3) remembers the sequence of events on a field trip and can recall them without help from the teacher.
(4) can arrange a series of pictures in sequence to tell a story.
(5) makes use of reading skills necessary for doing workbook exercises which test understanding of sequence.
(6) composes original stories based on a formula for time, place, thought indicated by the teacher.

B. Interpretation

Understanding Relationships, Drawing Inferences.

(1) learns to see relationships between situations, events, and people in the story.
(2) learns to look at a picture critically, to predict what may have gone before, and what might happen next.
(3) identifies with characters in a story and becomes involved in their experiences.
(4) explains their actions in terms of their characteristics.
(5) views filmstrips and predicts what might happen next before the next frame is shown.
(6) reads or listens to a story and creates his own ending by drawing a picture, modeling in clay, etc.
(7) answers questions which call for more than recall e.g. "Why did Noodle forget her wish?" "Can you explain Janet's action?" The sentence says she swung herself upon the roof. How do you think she got there?"

C. Critical Reading

Evaluating and Making Judgments

(1) makes predictions and checks them by reading and discussing details of the story.
(2) evaluates the accuracy of what is read by using predetermined criteria.
(3) distinguishes between fact and fancy, myth and reality in literature.
(4) reacts to the mood of a story, plausibility of action of characters, accuracy of author's information.
(5) evaluates a story on the basis of his personal experiences.

D. Creative Reading

Appreciating Literature

(1) enjoys storytelling or reading by teacher or librarian.
(2) broadens the repertoire of stories or poems he wants to hear.
(3) participates in sharing a well-prepared story with the class.
(4) brings good literature to school to be shared with the class.
(5) uses a library card to make reading for enjoyment a leisure activity.
(6) appreciates an author's choice of words and phrases.

Expressing Creative Ideas

(1) participates in creative dramatics.
(2) analyzes plots of stories to plan a creative dramatics experience.

(3) "tries on characters" to determine which role he would like in a play.
(4) participates in making a class movie of a favorite story.
(5) expresses the personality of a storybook character.
(6) depicts events through varied art media.

LEVEL C - GROWTH IN READING

I. Habits and Skills

The child is steadily developing in the area of reading and his habits and skills indicate this growth. At this level the pupil:

(1) masters the mechanics of reading.
(2) develops the ability to read longer sentences with understanding.
(3) follows simple directions independently.
(4) reads aloud with emphasis, clear enunciation, and changes in tone.
(5) brings books into the classroom for reading and discussion.
(6) begins to read items from the newspapers and magazines.
(7) reads traffic signs with ease.
(8) arranges words alphabetically by the first two letters of a word.
(9) listens with sustained attention and recalls facts easily.
(10) recognizes that different books have different purposes - readers, reference books, dictionaries, etc.

Library Skills

Growth in reading skills gives a child additional power in recreational reading and use of the library. He:

(1) develops standards for the care and handling of books.
(2) derives ever-increasing pleasure from listening to stories and poems.
(3) begins to recognize basic elements in literary selections.
(4) understands the difference between author, illustrator, publisher.
(5) uses the table of contents.
(6) understands the uses of a picture file and the classification under general headings, e.g. science, art, social studies.

Supplementary Reading Materials

children's books of fictional stories, informational articles, poems, rhymes, supplementary readers, fables, folktakes, fairy tales, simple classics, picture dictionaries, magazines, spelling materials, and alphabetical charts in manuscript forms.

Audio-Visual Aids

picture files, story-telling and informational films, filmstrips and recordings of children's literature.

Related Activities

See reading guidebooks and curricula for helpful suggestions.

II. Concept and Vocabulary Development - Including Word Recognition by Means of Phonics and Structure.

As a child develops in auditory and visual discrimination skills he:

(1) recognizes instantly on sight many word attack skills.
(2) recognizes that some words sound alike but have different meanings (Homonyms).
(3) continues the work in long vowel sounds. Learns the effect of silent e on the preceding vowel in most one-syllable words.
(4) practices blending consonants with long and short vowels.
(5) recognizes changes in root forms: e.g. final y is changed to i before est, ly, ed are added; final e is dropped when y, ing, er are added; f is usually changed to v before es is added.
(6) masters consonant blends such as gr, st, str.
(7) masters consonant digraphs such as sh, ch, th.
(8) learns the effect or r, w, or l on the vowel it follows: e.g. ar, er, aw, al, etc.
(9) learns that some consonants have variable sounds: e.g. g in get and gem; c in cut and city.
(10) learns that the same two letters have variable sounds: ow in cow, and low.
(11) learns that different letters may represent the same sound: telephone, funny, rough.

Continues to use a combination of clues, (sight context, phonics, structure) to unlock words but at the same time grows in rapid simultaneous use of the clues applicable to a given situation.

III. Getting and Interpreting Meaning

Children are developing the skills needed for rapid growth in reading. The length of time required to accomplish this will vary greatly; hence it is essential to be aware of each child's abilities and specific needs, and to provide the motivation of methods and/or materials which will stimulate him to read with enjoyment and meaning.

A. Literal Comprehension

Getting the Main Idea

(1) helps in listing the main ideas of a selection.
(2) expresses the main thought in his own words.
(3) selects significant scenes for dramatization as he gains experience in selecting the main ideas of a story.

(4) matches pictures which correctly portray the idea of a given sentence with the designated sentence.
(5) develops skill in finding the main ideas in supplementary reading materials as well as a basic text.
(6) studies a picture, reads several given phrases, and chooses the one which best expresses the main idea of the picture.

Finding and Relating Details

(1) is able to recall details as well as main ideas in material he reads.
(2) follows simple directions in finding details in workbook exercises independent of the teacher.
(3) recalls details of a passage vivid in imagery and illustrates his impression by creating a poem, a picture, a drama, a rhythm.
(4) becomes aware of clues which enable him to distinguish details from main ideas.
(5) learns the value of details in solving word problems and riddles.
(6) classifies objects in categories, e.g. "in the house" - furniture, dishes, utensils, appliances, etc; "in the pond" - pollywogs, turtles, minnows, frogs, etc.

Determining Sequence of Time, Space and Thought

(1) makes picture stories by illustrating the events of a story and arranging them in logical sequence.
(2) plans and lists steps needed to carry out a project in proper sequence.
(3) becomes aware of the importance of organization in carrying out and reporting a science experiment.
(4) takes an unorganized group of sentences and formulates them into a story.
(5) reads several sentences describing events from a familiar story and arranges them in sequence.
(6) follows directions that require ability to determine sequence in time as well as place.

B. Interpretation

(1) interprets the motives and feelings of story characters through picture and story content.
(2) relates what he reads to his own experiences and makes comparisons.
(3) describes actions of characters, implied but not directly stated or pictured in the text, during oral discussions of the reading.
(4) gives effective descriptions of the sensory images gained from reading a story.
(5) begins to understand cause - effect relationships.

(6) gains ability to select the specific sentence which predicts the outcome of events.
(7) is able to compose an ending for a story predicting the outcome prior to finishing the reading of it.
(8) goes beyond mere comprehension of the stated action and asks intelligent questions about the implied action and implications of the story.

C. Critical Reading

Evaluating and Making Judgments.

(1) makes value judgments about the truthfulness of the story.
(2) evaluates the behaviour of characters in terms of the evidence in the story itself.
(3) asks questions that give evidence of interest and some knowledge of criteria for evaluating the quality, veracity and sincerity of behavior of the characters.
(4) becomes concerned with the author's ability to make characters real.
(5) is concerned with the accuracy of what is read in terms of evidence presented.
(6) reacts spontaneously to the moral of the story if there is one.
(7) supports his ideas with evidence from experience, content, or observation.

D. Creative Reading

Appreciation of Literature

(1) shows increased pleasure in listening to stories during storytelling periods.
(2) becomes aware of the characteristics of a good story: exciting plot, characters true to life, climax and a solution of problem or resolution of conflict.
(3) identifies ways in which authors build suspense.
(4) begins to recognize differences in types of stories - folktales, myths, fairytales, etc.
(5) begins to understand the elements of theme, characterization, plot, style.
(6) has a growing appreciation of mood, imagery, mystery, humor and tragedy in stories he hears.

Creative Expression of Materials Read

(1) dramatizes stories with increasing attention to characterization of roles.
(2) composes poems centering around themes of stories he reads.
(3) uses puppets to dramatize stories in his reader.
(4) identifies with characters in the story he reads.
(5) illustrates stories by making a diorama, a frieze, a movie.

LEVEL D - RAPID GROWTH IN READING

I. Habits and Skills

The development of rapid growth in reading at this level allows participation in activities which require more specialized habits and skills. The child:

(1) retains and recalls facts presented orally or in written form.
(2) makes reports based on information previously heard or read, and uses this information in relation to other reporting activities.
(3) listens and comments courteously during a discussion.
(4) studies pictures as sources of information.
(5) finds specific information in reference books.
(6) uses an index.
(7) uses textbooks in the content areas.
(8) uses independently the word attack skills to unlock more difficult words.
(9) defines words in simple terms and selects wisely from among several definitions.
(10) expands his dictionary skills to select the appropriate meaning for his purpose.
(11) reads aloud with feeling, good phrasing and a well-modulated voice.

Library Skills

In conjunction with this growth in reading the library skills should be developed so that the child:

(1) becomes aware that a library provides information on any topic as well as books to suit any taste or interest.
(2) discovers that the book cover, title page, and table of contents may furnish clues in selecting a book.
(3) participates in the development of a class library by bringing his own books, by contributing to a picture file, by serving as a class librarian, by helping to arrange books by a simple classification according to school and/or public library arrangement.
(4) recognizes the basic elements in literature.

To aid in the growth of reading skills at this level, the following reading materials should be available:

> storybooks to suit the many interests and tastes, informational books, basal, supplementary and enrichment readers, workbooks graded for skill development, collections of poems and plays, variety of children's magazines and newspapers, atlases, dictionaries, crossword puzzles, anagrams, and word games, textbooks in the content areas, and alphabetized materials.

Audio-Visual Aids:

pictures, museum models, projects related to the content areas, puppets, maps, globes, television and radio programs, films, filmstrips, slides, recordings, songs, and musical instruments.

Related Activities

For helpful suggestions see the reading guidebooks and curricula in other subjects.

II. Concept and Vocabulary Development - Including Word Recognition by Means of Phonics and Structure.

(1) begins to understand that words may have special meaning in each curriculum area.
(2) works with synonyms, antonyms, and homonyms.
(3) maintains the word attack skills learned in all previous levels and adds more difficult blends and word variants.
(4) uses diacritical marks in the dictionary.
(5) becomes aware of accent.
(6) extends knowledge of syllabication, recognizes syllables in multi-syllabic words, common prefixes and suffixes; learns that ed is a separate syllable when added to words ending in d or t; learns that sh, th, ch, are not separated in syllabication.

III. Getting and Interpreting Meaning

The evidences of growth in reading are unmistakable at this level. Reading fluently, taking greater interest in a wide variety of materials, selecting books from the library, reading for pleasure, bringing books to school to share - these are some signs of growth during this level.

A. Literal Comprehension

Getting the Main Idea

(1) develops ability to read a story or selection and select immediately the best title from among those given.
(2) identifies main ideas and makes use of these in retelling the story accurately.
(3) reads a selection and chooses readily the statement of the main idea.
(4) answers questions spontaneously which elicit recall of material read.
(5) finds the topic sentence in a paragraph with ease.

Finding and Relating Details

(1) transfers these skills to other content areas: working a science experiment; solving a word problem in mathematics; using problem solving in social studies.

(2) is able to read and carry out written instructions for playing a game, locating a place, making a simple object.

(3) uses supporting evidence to prove or disprove a statement he has read. Details take on new meaning for him.

(4) is introduced to a simple outline of a story or sequence of events.

Determining Sequence of Time, Thought and Place

(1) gives facts in logical, sequential order when explaining how to arrive at a certain destination, or how to make something.

(2) rewrites or renumbers a group of given facts from a selection he has read or heard.

(3) begins to organize a book review using one of the following organizations: chronological; spatial; cause and effect.

(4) predicts the outcome of a story based upon the logical sequence of events given.

(5) determines the time span or sequence in two pictures of related events through observation, study, and organized thinking.

(6) summarizes a story effectively by organizing a series of pictures in sequential arrangement.

B. Interpretation

Understanding Relationships, Drawing Inferences

(1) reads to discover clues about the characters of a story: how they look, feel, think, speak, react to situations.

(2) makes inferences about the suitability of action ascribed to a character by an author in terms of what he learns in the story.

(3) learns that authors give clues for predicting outcome: e.g. "The huge oak door opened slowly, creaking on its hinges, as the man tiptoed in." versus "The door banged open as the man strode in."

(4) develops ability to draw conclusions from details given in a picture (e.g. suggests occupations from type of land formation, dress, or from types of buildings).

C. Critical Reading

Evaluating and Making Judgments

(1) becomes increasingly adept at making generalizations.

(2) is able to reason cause and effect in relation to a story.

(3) makes comparisons which show he is judging validity of what he reads on the basis of printed evidence or personal experience.

(4) analyzes a character and gives proof of his opinion.

(5) reads several versions of the same story and selects the best using criteria such as quality of writing, accuracy of detail.

(6) can explain his feeling of empathy for a particular character.

D. Creative Reading

Appreciation of Literature

(1) enjoys hearing favorite poems read again and again.

(2) becomes aware of plot, character development, literary forms and uses his knowledge in his own creative reading.

(3) grows in ability to use as well as appreciate "shining words".

(4) follows a continued story with understanding.

Creative Expression of Materials Read

(1) dramatizes stories in ways that reveal his understanding of motives and feelings of characters.

(2) writes original stories that show evidence of understanding of simple elements of a story: plot, characterization.

AUTHORIZED TEXTS

1. Curriculum Foundation Series (for 1966-67 only)

   We Look and See)
   We Work and Play) Pre-Primers
   We Come and Go)

   Fun With Dick and Jane - Primer

   Our New Friends - First Reader

   Think-and-Do Book for Pre-Primers
   Think-and-Do Book for Fun with Dick and Jane
   Think-and-Do Book for Our New Friends

2. Canadian Reading Development Series

   Off to School - Pre-Primer

   Come Along With Me - Primer

   It's Story Time - First Reader

   Workbooks A and B for Off to School
   Workbooks A and B for Come Along With Me
   Workbooks A and B for It's Story Time
   (Teachers should note: Children use either A OR B)

Ancillary Materials for Canadian Reading Development Series:

1. Teaching Kit for Pre-Reading and Language Activities
2. Teachers' Manuals for each Student Text
3. Chart Story Pictures for Off to School
   Picture Cards
   Word Cards
   Colour Filmstrips
4. Chart Story Pictures for Come Along With Me
   Picture Cards
   Word Cards
   Colour Filmstrips
5. Chart Story Pictures for It's Story Time
   Picture Cards
   Word Cards
   Colour Filmstrips

REFERENCES AND SUPPLEMENTARY MATERIALS

TEACHER REFERENCES FOR READING, LANGUAGE, LITERATURE

1. Harris, A. J.: How to Increase Reading Ability (Longmans Green 4th ed. 1961.)
2. Russell, D. J.: Children Learn to Read (Ginn and Co., Ltd. 2nd ed. 1961.)
3. Spache, G. D.: Reading in the Elementary School (Allyn and Bacon 1964.)
4. Smith, Nila B.: Reading Instruction for Today's Children (Prentice-Hall 1963.)
5. Dechant, E.V.: Improving the Teaching of Reading (Prentice-Hall 1964.)
6. Roswell, F. and Natchez, G.: Reading Disability, Diagnosis and Treatment, (Basic Books Inc. 1964.)
7. Greene and Petty: Developing Language Skills (Allyn and Bacon 1959.)
8. Shane, Reddin, Gillespie: Beginning Language Arts Instruction With Children (Charles E. Merrill 1961.)
9. Applegate, Mauree J.: Helping Children Write (Row, Peterson and Co. 1954.)
10. Applegate, Mauree J.: Easy in English (Row, Peterson and Co. 1960.)
11. Rittenhouse, C. J.: Language Comes Alive, a Teacher's Handbook for Primary Grades (J.M. Dent.)
12. Affleck et al: Language Journeys (Grades I and 2) (Macmillan Co.)
13. Bailey, Mildred, et al: Language Learnings, (Kindergarten, Grades I and 2) (American Book Co. 3rd. Ed. 1963.)
14. Canadian Citizenship Branch, Ottawa: Learning the English Language (Thos. Nelson & Sons.)
15. Larrick, Nancy: A Teacher's Guide to Children's Books (Charles E. Merrill 1960.)
16. Larrick, Nancy: A Parent's Guide to Children's Reading (Pocketbooks Inc. 1958.)
17. Arbuthnot, May Hill: Children and Books (Scott Foresman and Co. 3rd ed. 1964.)

SUPPLEMENTARY MATERIALS

COMPREHENSION SKILLS

1. Merrill, C.E.: New Reading Skilltext (P.P.-IX)(Nelson of Canada)
2. Stone, Grover et al: New Practice Readers (Book A-G) (McGraw-Hill)
3. Reading Skill Builders (Readers' Digest) I-VIII (Nelson's of Canada)
4. Weekly Reader Practice Books K-VI (American Education Publications, Education Centre, Columbus, Ohio.
5. Games - (a) Match Sets I & 2 (Picture cards K-1) (Thos. Nelson and Sons)
   (b) Dolch Picture Word Cards (95 most common nouns) (Thos. Nelson and Sons)
6. Thomas, Mary E.: Developing Comprehension in Reading (2 and -2, 3 and -3) (J.M. Dent)
7. Gates, A.I. and Peardon, C.C.: Exercises in Reading (Bureau of Publications, Columbia University, New York)

WORD RECOGNITION SKILLS

1. Durrell, Donald D., Sullivan, H.B. and Murphy, H.A.: Building Word Power in Primary Reading (rev. ed. Longmans)
2. Developing Children's Word - Perception Skills (W.J. Gage Ltd.)
3. Sheldon Phonics Charts - Sheldon Reading Series (Allyn and Bacon)
4. Phonics We Use Books A, B, C, D, E, F. (Lyons and Carnahan, Minneapolis)
5. Durkin, Dolores: Phonics and The Teaching of Reading (Bureau of Publications, Teachers' College Columbia University 2nd ed. 1962)
6. Collins, K.E.: Look, Listen and Learn (Copp Clark 1960)
7. Check and Doublecheck - Wordbook in Phonics (Jack Hood School Supply 1963)
8. Radnor, P.B.: Phonogram Books 1, 2, 3, 4 (Hammond and Co. Maplewood N.J. 1959)
9. Armstrong and Hargrave: Building Reading Skills Bks I-VI, (Copp-Clark)
10. Kottmeyer et al: Basic Goals in Spelling Book II Teachers' Edition (McGraw-Hill)
11. Harris, Creekmore, Greenman: Phonetic Keys to Reading Series (Economy Book Company 1964)
12. Spalding, R.B. and Spalding W.T.: Writing Road to Reading (Whiteside Inc. rev. 1962)
13. Sister Mary Caroline, I.H.M.: Breaking the Sound Barrier A Phonics Handbook, (Collier Macmillan)
14. McQueen, Priscilla and Arthur S. Trace: Open Court Basic Reading Series (Open Court Publishing Co.)
15. Edwards, Rosalind and George Edwards: Reading Through Phonics (Dent)
16. Sister Mary Caroline I.H.M.: Breaking the Spelling Barrier, Books 1, 2, 3. (Collier Macmillan)
17. Brake, Rachel G.: New Phonics Skilitext a-e (Charles E. Merrill Books Inc. 1964)

(this list is by no means exhaustive)

SPEECH TRAINING

1. Burgess, C.V.: Junior Verse in Action (Books 1-4) (Musson Book Company 1965)
2. Brigance, W.N. and Henderson, F.: A Drill Manual for Improving Speech (McLelland and Stewart 3rd Ed. rev.)
3. Fairbanks, Grant: Voice and Articulation Drillbook (Harper 2nd. ed.)
4. Stratford, K and W.: Speech and Language Activity Books 1 and 2 (Holt Rinehart & Winston 1965)
5. Schoolfield: Better Speech, Better Reading (Copp Clark)
6. Brown, H. Helman, K.J.: Read-Together Poems (Copp Clark)

Enrichment

Little Owl Library - edited by W. Martin, (Holt, Rinehart and Winston)
Nunnybag Series, Books 1,2,3,4, (W. J. Gage Ltd. 1962)
Sounds of Language Series (Holt, Rinehart and Winston)
Ginn Enrichment Series (W. J. Ginn and Co.)
Woodland Frolic Series (Ryerson Press)
Wonder Wonder Series (Ryerson Press)
Treasury of Literature Series (Nelson's of Canada)
Fay, Leo C: The Curriculum Enrichment Series (Ryerson Press)

Literature

Arbuthnot, M. H.: Time for Poetry (W.J. Gage Ltd. 1959)
Arbuthnot, M. H.: Time for Fairy Tales (W.J. Gage Ltd. 1961)
Arbuthnot, M. H.: Time for True Tales (W.J. Gage Ltd. 1961)
Tooze, Ruth: Storytelling (Prentice-Hall 1959)
Ousley, Odile: V for Verses (Ginn and Co. 1964)
Austin and Mills: The Sound of Poetry (Allyn and Bacon 1963)
Sheldon, Lyons, Rocault: The Reading of Poetry (Allyn and Bacon 1963)
Bamman, H.A.: Oral Interpretation of Children's Literature (W.C. Brown 1964)
Arbuthnot, M. H.: Children and Books (W.J. Gage 3rd ed. 1964)

Special Note:

Childcraft Worldbook of Canada Ltd. 150 Eglinton Ave. E., Toronto 12, 1966.

(This junior encyclopedia series should prove of great benefit in all subject areas Grades One through Six.)

APPENDIX J

RESEARCH ON READING

The following represent some of the very many research studies on reading undertaken in recent years. This list does not attempt to be exhaustive. Reference to sources where reports of these studies can be found has been included.

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7. Courtney, Brother Leonard, "Methods and Materials for Teaching Word Perception in Grades 10-14, Sequential Development of Reading Abilities." Conference Proceedings, XII. Chicago: University of Chicago Press, 1960, 42-46.
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9. Deighton, Lee C., "Vocabulary Development in the Classroom." New York: Bureau of Publications, Teachers College, Columbia University, 1959.
10. Dolch, E.W., "Am I Teaching Phonics Right?" Elementary English, 34, (April 1957), 227-33.
11. Farinella, John Thomas, "An Appraisal of Teacher Knowledge of Phonetic Analysis and Structural Analysis," Doctoral Dissertation, University of Connecticut, 1960.
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